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ORIGINAL CONTRIBUTIONS.

SYPHILIS IN WOMEN.

BY A. R. WILLIAMSON, M.D.

In women the evolution of syphilis is frequently different from that in men, and in actual practice there are many difficulties. A curious statement is made that syphilis is generally found in men and is relatively rare in women, but this is not especially true. There are three general reasons why the diagnosis of syphilis in women is hard: first, the conformation of the organs in the female sex; next the nature of the symptoms; and lastly, it is hard to get corroborative facts.

The vulva has three planes. The first is a superficial one in front of the mons veneris and behind the labia majora. The next plane is composed of the labia minora and the clitoris. Then there is a deep plane, the vestibule, meatus urethræ, and the vaginal opening. This makes it a source of difficulty to diagnose the first symptom of syphilis, just at the moment when it is most imperative to settle the matter. If the chancre is detected on the labia majora, the diagnostic trouble is small, but unfortunately for all concerned, this is not its most frequent site, for the lesion may be hidden in the vaginal folds, or under the clitoris, behind the labia minora, or at the entrance to the meatus. It has been found behind the fourchette in the caruncular crease. The fact that chancre in women may take a linear form increases the troubles of the attending physician.

Consequently it is necessary to examine every vaginal fold, including the meatus, the fourchette, and the caruncle. A vaginal speculum should be used, for the chancre may be on the uterine os, or even in the wall of the vaginal canal.

The initial lesion in syphilis is often rendered difficult from its insignificance; it may be mistaken for herpes, or for an intertrigo, a simple balanitis, or herpes vaginitis, or chancroid. Occa-

sionally it is mistaken for neoplastic growth in consequence of the enormous amount of induration with which it is occasionally accompanied. This is particularly the case if the initial lesion be extra-genital, as for example when seated upon the tonsil, fingers, or palpebral fissure, as occurred in a case in Fournier's service, where it was mistaken for a lacrimal fissure. On the other hand, the initial lesion may be also mistaken for other affections: (1) Syphilomata of the genitals; (2) induration orifices of a perivulvar abscess or abscess of the vulvovaginal gland; (3) tubercular ulcerations of the tongue and penis; (4) ulcerations resulting from arsenical poisoning, but in these cases there is no accompanying adenitis; (5) furuncles; (6) deep ulcerations of the balano-preputial folds resting upon true indurations. These occur in diabetic patients, Veneuil having seen quite a number of cases.

The chancre, which is not always characteristic in the male, is still less in the female. for generally it is neither hard nor painful, and may be lacking even after the most careful search. It is well to remember that the chancre in women frequently appears merely as a parchment-like puffing in the mucous membrane. Fournier has formulated a rule to detect this: grasp with two fingers the extremities of the largest diameter of the ulceration and raise it as though you would tear it off, and you will get the parchment-like sensation which these chancres give. The reason that this induration is generally in women is that its anatomical condition does not depend upon the ulceration itself, but on the stricture of the underlying parts. It is an excellent rule to remember that in any inflammatory new formation of whatever nature, the harder the tissues the more difficult and slower it is for the inflammation to extend. For this reason the hard chancre in man is generally found in the balano-preputial groove, for at this point it lies on the elastic fibers of the gland; while in women the genital chancre has its most common site on the labiæ, large or small, or on the fourchette, where there is no induration, and hence no possibility for the formation of hard chancres.

To diagnose chancre from herpes or a simple inflammation of the vulva, it is well to remember that the initial lesion is single as a rule. Adenitis follows the chancre as the trunk follows the root of the tree, expressing itself in a unilateral hardening of the adjacent ganglia, hard and indolent in character. The adenitis of chancroid is painful in character. Should adenitis follow simple vulvitis, it is bilateral in character, while in herpes there is no adenitis. Again, edema of the labia majora nearly always

accompanies a chancre, not appearing so commonly in other vaginal conditions.

Even when we come to the secondary symptoms in women, it is still more difficult to diagnose than the same condition in man.

Syphilitic alopecia in women is apt to be slight; in many cases it is impossible to find any falling out of hair at all. Again, many women have an eczema, which results in their losing a little hair. Nearly all women lose some hair from the habit of constant combing, which loosens a certain percentage at each toilet. Still the little papules on the cerebral skin will aid diagnosis, as combined with alopecia they are of diagnostic import. Alopecia of the eyebrows is almost pathognomonic, however. The mucous membranes in women are extensive and afford considerable space for syphilitic signs. The back of the neck in women, at the junction of the hair and the uncovered flesh, often exhibits small copper-colored patches which are very significant.

In the typical case there should appear on the woman's skin a series of reddish or rose-colored spots; at the same time the hair is thinned and crusts are seen on the head. In the pharynx and tonsils grayish spots are seen, with difficulty in swallowing. Around the vulvar and anal regions mucous patches are generally seen. The cervical, inguinal, and epitrochlear ganglia hypertrophy, showing the invasion of the whole system. Here are the difficulties: The roseola may be so slight that it cannot be seen. Under these circumstances it is well to have the patient take a hot bath, when it is more likely that the spots can be observed.

European writers have called attention to the fact that some women of a scrofulo-tubercular type have a marbled skin over the abdomen and limbs. This condition often resembles roseola, but care will prevent error. These rose-colored marble skin spots are not isolated, but run in long lines over the thighs, legs, and abdomen. Genuine roseola is more common around the breasts and on the sides. This can generally be confirmed by other data, especially in exploring the anal, vulvar, and pharyngeal regions.

Should the roseola be sparse, it is well to examine the hands, the palms, and if undecided, the soles of the feet. In advanced syphilis some writers call attention to an especial symptom in women, not in men: it is the "pigmentation syphilide." This is an exaggeration of the natural pigment of the skin, taking on a lace-like outline, presenting clear spaces surrounding islands of pigment.

The color of the fauces, the pharynx, and the tongue, even in the normal state, varies much: thus in some women the throat is always reddish, in others grayish, so the descriptions given in the books on the subject cannot be absolutely correct. Authorities tell us that the throat is gray in secondary syphilis; yet a simple gray color does not mean syphilis; gray patches, differing from the coloration of the rest of the mucous membrane of the part, must exist. These patients do not by any means all have pain; some women do not realize that there is anything the matter with their throats, so that this symptom is not at all a sure one. The throat may be an uncertain guide. The examination of the tongue is very indefinite, except when papules or plaques are found on the back of this organ; yet the large calyciform papillæ at the base of the tongue have been mistaken for syphilitic papules. In studying swollen glands and ganglia in women, remember that the sex is naturally lymphatic, and great difficulty in deciding if the adenitis is scrofulo-tubercular or syphilitic may exist. The ganglionic system in women is more developed than in man, and hence these signs have by no means the same value. If the epitrochlear ganglion is swollen the sign is of value, but it is rarely found either in man or woman.

Not until we come to tertiary syphilis are the signs and symptoms the same in both sexes. In women the copper color of syphilides is important, and in visceral syphilis they have much pain at night. The aggravation of the symptoms when mercury has been given in cancerous cases by mistake is well to remember. The seats of predilection for these syphilides are the nose, forehead, and the hairy border of the lips, the back, the deltoid region, forearms, neck, and the dorsal surface of the hands. The ulcerative syphilides do not usually appear until after the third year, and are simply a continuation of the first form—the non-ulcerative. They may either be single or multiple. They begin in a more insidious manner, are chronic in their course, and are very liable to relapses. Both varieties may be complicated by inflammation, erysipelas, gangrene, and phagedena.

When it comes to the last cause of difficulty in diagnosis, the lack of corroborative facts, the physician is often placed in a difficult, embarrassing position. If your patient is a prostitute, while the presumption is against her, it is hard to get the slightest data to help you, while in other women it is still more difficult, for frequently social problems are involved. It is well, therefore, not to depend on this source of information in making a diagnosis, beyond remembering that no position of

life is exempt from the disease, from the princess down to the pauper. Unfortunately, innocence is no protection, for many women of course get the disease most innocently. Women are accustomed to discharges from the vagina, and the slight discharge from syphilitic sores may be mistaken for irritation, leucorrhea, or plain "pimples." The majority will deceive you purposely or unintentionally. .Prostitutes are anxious to keep out of trouble for fear of depreciating their earning value, while good women naturally are either ignorant or ashamed for one reason or another. In the words of a well known French clinician, in cases of doubt you must, under some pretext or other, proceed to examine them all over; see the entire skin surface, examine the lympathatic system, the mucous membranes, and every portion of the woman. If, notwithstanding all, you cannot discover anything, try adroit questioning to see if you can find out anything; remember that Beaumarchais cynically described a woman in saying "her natural instinct is to deceive." If you fail to get a diagnosis, give some simple remedy and make the patient come from time to time, and you will frequently be surprised by getting the signs you are expecting. Specific treatment, as in man, ought to be commenced early to succeed well. The treatment, of course, is the same as in the male, and should be continued as long.

THE PHYSIOLOGICAL ACTION AND THERAPEUTIC USES OF THE X-RAY.[1]

BY C. M. MUTZ, M.D., DOUGLAS, KANSAS.

I wish frankly to state at the outset that I do not think I present a paper eminently worthy of your attention. I am even conscious of the meager respect my efforts to address superiors on the weighty subject I essay may deserve, especially since it is true that all my thoughts and reasonings are based entirely on clinical observation in private practice, and use of the *x*-ray for a period of about two years.

I may, therefore, be classed in some minds with the immature operators, but I shall try to be becomingly modest, and use the interrogation point without stint. Again, I have not advanced to that eminence where I have many winds to shake me, and cannot, therefore, fear being dashed to pieces by any fall I may make in your estimation. But as it is only the pseudo-scientist

[1]Read before the Mississippi Valley Medical Association, October, 1902.

I could have reason to dread, I need not make myself odious to this body by apology.

The conservative physician and surgeon may believe themselves justified in a moderate estimation of the therapeutic value of the three general forms of electricity, viz., the faradic, galvanic, and static currents, but I do not think they can wholly suppress their wonder at the marvelous results accomplished by the, as yet, empirical and tentative use of the *x*-ray.

I have accomplished numerous satisfactory results with it in what may be called minor troubles, although they resisted the efforts to cure of very reputable physicians by other means; but I have two cures to my credit, backed by such authority in diagnosis and in failures to benefit as will, I trust, amply justify me in your minds in my efforts to comprehend to the limit of my learning and understanding the agency by which these results were secured.

J. S. B——, of Beaumont, Kansas, came to me presenting a flattened ovoid tumor extending over the angle of the jaw onto the neck. It was the third recurrence of the growth, it having been pronounced a sarcoma and removed first, about four and a half years ago, by Dr. Emerson, of Winfield, and about a year afterward by Dr. Senn, who also pronounced it a round-celled sarcoma, and made a very extensive operation for its removal, in which he cut away the superficial branches of the cervical plexus. Within a year the tumor again returned, involving adjacent tissue, and grew rapidly until, when he came to me, ulceration was taking place at the apex. Ten exposures to the Roentgen ray, of an average duration of twenty-five minutes, reduced the tumor one-third and healed the ulcerated surface. Twenty more of the same kind completely removed it, and brought him back to a state of general health. This cure is of about a year's standing, and there are no indications of return.

G. S. H.——, of Pierce City, Missouri, came to me about four and a half months ago with a carcinoma presenting a sloughing colloid center. This tumor was situated on the neck, and its center covered the mastoid end of the sternomastoid and splenius muscles. The degenerated center was conical, one and one-half inches in depth, and one and one-half inches in diameter at the base of the cone cavity, or between the margins of the integumental covering surrounding it. This gentleman had his case diagnosed by a number of medical men, whose opinions were in harmony as to the condition. Just before coming to me he was seen by Dr. John W. Perkins, who declined surgical

interference and referred the case to Dr. Scott for *x*-ray treatment. Mr. H—— informed me that he had received sixteen exposures, and he thought with some benefit.

You will understand, from the location and extent of tissue destroyed, something of the patient's general condition. He was sleepless with pain; there was marked anorexia; cerebral and gastric disturbance from involvement of nerve plexus sending branches to the pneumogastric; speech was difficult, and deglutition all but impossible. I understate rather than overstate the objective symptoms.

I vouchsafed no hope to this patient, but gave him a prolonged treatment, and he was taken home. He received such benefit from this one application, however, that he was brought back in two weeks. He improved rapidly for a time, and then retrograded for a season, during the heated term, but advanced again, and is at this writing making progress toward recovery.

Since writing the report of the progress of this last case, the patient returned to his home in Missouri, and died from the effects of hemorrhage, caused by rapid degeneration of the deeper tissues involved, and comprising, I judge, a branch of the carotid.

To present two successful cases I have to mention one of less importance, and one no better authenticated than by my own diagnosis and the patient's self-conviction, who had a very bad cancerous history: An epithelioma of typical honeycomb appearance, existing four years, and resisting all means employed to cure it—but not surgically dealt with—was cured on the person of R. R——, of Douglas, Kansas, two years ago. I first treated this case, however, by galvanic mercuric diffusion, or mercuric oxychloride cataphoresis; but the *x*-ray was more prompt in the regeneration of normal tissue.

I am not intending to make a clinical report of these cases and their treatment, but merely to refer to them as a stimulus to my inspiration for study of the material physiological laws governing the agent so kindly favoring my use of it. I know that equally remarkable results have been accomplished by others the country over, but only my own achievements could serve to brace me to so much boldness.

To begin at the beginning, we may broadly state that the Roentgen or *x*-ray is the result of both potential and kinetic electric energy, but whence comes this force of mighty potential, that stirs the kinetic energy within the tube, vibrating the ether to the extent of producing the light permeating opaque substance? A few sparks, awakened by friction and caught up by a paper

element on a stationary plate, in a static machine, inducing a reciprocal charge on a revolving plate and increasing to enormous potential by reaction effects, and we have it! But this is only a method of calling a sleeping force into action.

Where does it slumber? Where do the antagonistic elements of its nature, necessary to the expression of force, equilibrate and rest innoxious? "We now are in so deep that should we wade no more, returning were as tedious as to go o'er," so we venture on. Electric energy is said to exist everywhere and in everything, but has it been found to exist in ponderable matter without polarization of the molecule? In ponderable matter does it not evidence its presence by disintegration, molecular decay, or the chemic decomposition of electrolysis? Has it been demonstrated that ether and electricity are not coefficient—that they are not coessential and coexistent? For our own cogitations we have defined electricity as a capable force in nature equilibrating and at rest in the atom of ether. But it may be objected that ether is not atomic—that it is an absolutely continuous imponderable substance, impossible of atomic conception. But are we not instructed that an atom of matter is not simple but compound; that it is composed of hundreds of similar parts which may be separately dealt with from the rest of the atom and each fragment electrically and ironically charged? Is it not necessary to have a limitless base of supply for this force, from a universally permeable substance, in which it is at rest, to account for its phenomena? We think it necessary to conceive of ether as matter. We do not feel the least inclination to conceive of light as matter, because we recognize at once that it is a process going on in substance, yet light may be shown to have two portions the exact opposite to each other, which may be divided by certain arrangements, and again united to annihilate each other.

Now as to the light of the Crookes tube, what is the process going on within the exhausted tube to give us the light, illuminating opaque substance, and yielding the physiological action and therapeutic uses the ray gives us? What have we within the tube? An elastic substance, capable of stress and motion, but not a conductor of electric currents.

In the method of genesis of the *x*-ray, we separate metallic conductors within this substance, which in atmospheric media would be but a spark-gap, and turn onto them respectively positive and negative currrents of tremendous electromotive force, but infinitesimal quantity.

Now in the true sense there is no passing of the current from

one electrode to the other, because ether will not conduct electricity, but they are both thrown into the tube and mix up with the substance in some way to produce the unaccountable penetrating ray: not only mix up with it to produce it, but become a necessary part of its existence beyond the tube. No one, I suppose, presumes to deny the negative polarization of the atoms and molecules of the ponderable matter through which the rays pass; it is too easy of demonstration. Now is it accepted that this light is matter, or substance? I have heard it stated that Sir William Crookes regarded it as consisting of matter in a fourth state. We have seen that ordinary light is not substance, but a process operating in substance. Shall we be content to say that *x*-ray light is something not material, a new kind of radiation which the finite or ordinary mind has no business to inquire concerning?

Pardon us for believing otherwise on this latter proposition. Then inquire further: Is the ray produced by negative ions thrown off from the cathode, exciting hypervibration of ethereal waves? I have known of this theory being advanced, but if this were so, would not negative ions demonstrate these same light-producing qualities in other situations? And would not energy so devoted be frittered away by irregular vibration? Again, are not ions the product of electrolytic action on matter? And can appreciable electrolysis be accomplished with a current of infinitesimal quantity? The following theory may not be worthy of consideration, but we give it. There passes into the tube an excess of negative current. Is it because the cathode is made of better conducting and relinquishing material? This would interrupt the resting equipoise of electric components in the atom of ether, and there is set up a hypervibration of the enforced negatively polarized atom, which must seek equilibration without the tube. As long as the ether is so influenced it illumines the substance through which it passes. When equipoise is established illumination ceases.

If ether were an absolutely continuous medium impossible to affect in part or atomically, would not the vibration necessary to produce the *x*-ray light reach a hundred feet, a thousand feet, or an incalculable distance from the tube? But it is recognized as an electrically influenced radiation, and distinguished by the name cathode ray, and as such we consider its physiological action.

So far as we have learned there is little evidence that actinism plays any important part in the therapeutic value of the ray. If it did so, would not the arc light, concentrated by lenses or

reflected by mirrors, be of as great value, or even greater, in surface condition at least? The activities of the arc light, it is said, include the violet, ultra-violet, and many others, which take part in photographic action.

The *x*-ray's value, then, must be due especially to that quality which designates it as the cathode ray. It is the effect of negative electricity applied in a new way by which it influences metabolism to a greater extent, in some respects, than by any way in which it has been applied heretofore.

What, then, do we regard as its highest physiological effect? It is a diffusible general stimulant of the highest type, and a transcendent one to the tissues through which it passes, promoting the destruction of microörganisms and inimical cells by increased phagocytic influence. Protoplasm, which has lost the influence of nervous control, produces injurious cells which are destroyed in like manner. I have seen an authoritative opinion that "the *x*-ray contracts protoplasm." I assume this to mean all protoplasm, but have discerned no results which lead me to believe this is true. Protoplasm of fungoid growth—protoplasm with vacuoles may be contracted, but does it have a contracting effect on physiological protoplasm? I can only reason, *a posteriori*.

The *x*-ray may be directly destructive of some non-animal microörganism, but I cannot believe it a universal germicide. Certainly it is not an insecticide. It will not kill the chigger or leptus irritans, a special pest of my resident locality. I am led to believe that its germicidal powers are limited from the fact that I have found eczemas and pruritus and other surface affections, which in my opinion did not depend on specific microorganisms, to be amenable to the *x*-ray treatment.

It seems to be destructive in some way of certain streptococci and to favor the development of certain staphylococci of pyogenic variety, as it quickly changes the seroacrid and offensive discharge of phagedenic ulcers to a laudable secretion of alkaline reaction. Is this phagocytic action? It has been claimed by some that the ray has an analgesic property. This I have not found pronounced.

It has not relieved the pain of sciatica or other neuritis in my hands, but it soothes the irritated nerve centers, by stimulation I think, to the point of somnolence. We have been told that the *x*-ray is a "giant in chains," and those who have the temerity to unchain it have been given fair warning. To "make haste slowly" is a good precept in all important procedures, but I have seen no greater reason for caution in the use of the

x-ray than is necessary in the use of the sound, and I doubt if more harm will be done with it by the tyro.

Regarding the technique of application, I do not believe there can be harmony of opinion except in a general way, for the reason that exactness is impossible on account of varying constitutional conditions. Regarding the *x*-ray burn, which some say is necessary for therapeutic effect, and others that it is not only unnecessary but most undesirable, I have to conclude that it is sometimes necessary and sometimes not.

The measure of a tube to burn is not a measure of its curative power, but if your exposures are inefficient without dermatitis, it will be necessary to proceed to this extent, and following this objective evidence of its activity, you may get the effects desired.

Respecting *x*-ray cataphoresis, I would not deign to notice the subject at all, were it not that I have encountered, in my journal reading, some very learned advocates of the feasibility of the procedure, because it seems to me that the *irrazionale* of the idea should be patent to any one. Cataphoresis is the anodal diffusion of medicinal substance to deep-seated tissue, or if we wish to give it a broader definition and say that it is medicinal substance carried by molecules accompanying electric currents, we still have no foundation for the supposition that molecules will convey substance which seeks the anode, along with the ray! Notwithstanding, I have experimented with cocaine and other solutions, but have been unable to discover any results indicative of penetration. The discutient effects, nearly always observed in non-cachectic indurations, are not more marked, I think, than by the application of the galvanic cathode. But I have a last averment to make, and I make it indubitably, which is this: that the *x*-ray will be found beneficial in all local pathological conditions of a chronic or subacute variety, where stimulation of reconstructive metabolism is desired.

TO WHAT EXTENT MAY WE HOPE BY TREATMENT TO DELAY THE PROGRESS OF CATARACT?

BY C. F. CLARK, M.D., COLUMBUS, O.

When informed that he has opacity of the crystalline lens, and that this is a progressive disease, the culmination of which is blindness, it is only natural that the first question asked by the unfortunate patient should be, Is there no means known to science by which this disease may be cured or by which its progress may be checked?

If the patient has been induced to consult the oculist on account of marked impairment of vision, the cataractous process has generally advanced to such a point that the answer must be to the following effect: While possibly the progress of the cataract may be slightly influenced by your manner of life, the care observed in the use of your eyes, and internal medication, nothing that we can do will prevent your cataract from going on to maturity, and we can offer you no relief excepting by an operation for the removal of the crystalline lens, and this should be delayed until the changes taking place in the lens cells have so far advanced as to render the conditions favorable for extraction.

In the face of such an answer is it strange that the unfortunate patient lends a willing ear to the charlatan who announces with confidence that he will within a few weeks or months restore to his eyes the clearness of youth, and who extols the virtues of that God-given force, electricity, or that wonderful and costly extract obtained at great pains by a secret process from a rare South American plant known only to a few Indians and patent-medicine men? And when in addition to this he is told that this wonderful process of cure is beyond the reach of the non-progressive members of a conservative profession, and is confronted with testimonials from eminent jurists and divines who have been absolutely cured within an incredibly short time, is it strange that he says, "I will drink of this fountain of youth"?

Has human nature changed since the quest of this evasive spring? While the proud Spaniard of the fifteenth century sailed for months on unknown seas, and toiled for years through the tangled forests of a strange land to obtain the fluid that would make him young again, the humblest American citizen of the nineteenth century has the fountain brought to his very door, and may buy the water of life from the patent-medicine man at a dollar a bottle! And by the magic touch of a few drops of this wonderful juice of a South American plant, a century of labor by the best minds in the medical profession who have devoted themselves to the development of the operation for the extraction of cataract has been rendered of no avail. Truly wonderful are the advances of modern science!

But is it true that, aside from an operation, the medical profession has nothing to offer to the victim of cataract? In a limited sense it is. In a broader sense it is not. If well defined degenerative changes have taken place in the cell structure of the crystalline lens, and opaque lens cells are present, they remain unabsorbed. There is no sufficient evidence known to the writer that in any single instance a true, simple, senile cataract was ever

cured by the use of remedies applied to promote its absorption. But there is abundant evidence that many cases of obscure and insidious disease of the eyes have been controlled by careful management and treatment, which had they been allowed to run their course would have resulted in the development of cataract.

These cases are probably far more numerous than is generally recognized. I would venture the statement that a large number of those within the sound of my voice who consider their vision quite perfect would find, if their pupils were well dilated and their eyes subjected to close scrutiny, that they have more or less opacity in the periphery of the crystalline lens associated with other evidences of insidious changes in the uveal tract.

In the discussion which follows I would direct your attention to that form of cataract which is generally termed simple or uncomplicated cataract, and which is usually classified as one of the diseases of old age; but congenital and juvenile cataracts and cataracts due directly or indirectly to traumatism, or which are merely a complication of a well defined attack of iritis, cyclitis, or choroiditis, or which accompany glaucoma or detachment of the retina, are excluded.

This question has been so fully and so ably discussed in the special literature of ophthalmology by numerous foreign writers, and in this country by Risley, Weeks, de Schweinitz, and others, that there would seem to be but little that is new to be said upon the subject, but I have been convinced that many physicians in general practice have never had their attention directed to these writings, as otherwise we would not so frequently hear of the encouragement which patients with cataract receive from their medical advisers in the use of electricity, "cineraria maritima" and the numerous other remedies prescribed to promote absorption of opacities of the crystalline lens.

In cataract an early diagnosis, not only of the changes in the lens, but also of the underlying conditions on which those changes are dependent, is of vital importance if we are to be of real service to our patients in conserving their vision. And in this respect ophthalmology does not differ greatly from other departments of medical science. In proportion as we succeed in detecting the underlying cause of any disease in its incipient stage, do we succeed in our efforts to check its progress or effect a cure; and the final triumph of scientific medicine will have been attained when, before the development of any given lesion appreciable to our senses, we will have learned to recognize the underlying conditions which may lead to it, and by their removal to prevent its development.

What, then, are the underlying causes of what we term senile cataract? In general we may say that all of those conditions which tend to tissue degeneration may be classed as indirect causes of cataract, and as a corollary it may be said that in retarding or preventing cataract those general conditions should be observed which tend to preserve the integrity of all of the tissues of the body.

But to be more specific, what special conditions are to be observed if we would prevent the formation, or hold in check the progress, of an incipient cataract? We must here turn to the sources of nutrition of the crystalline lens, and study the causes and conditions which interfere with its obtaining its full supply of nutritive material, and those other causes which retard elimination of waste products. The great vascular supply or nutritive reservoir of the eye is the uveal tract, consisting of the choroid coat, ciliary body, and iris; and the nutrition of the lens is dependent upon the integrity of these structures, especially upon the ciliary body and choroid. While, as in other portions of the vascular system, serious changes may take place of a character so insidious as to evade detection, it is nevertheless true that by a careful inspection of the fundus of the eye with the ophthalmoscope, and a close study of the general vascular system and of those systemic conditions upon which vascular degenerative changes are known to depend, we may in many instances discover the underlying cause, and by careful management and well directed treatment prevent, or at least retard, the progress of those cell changes which we term cataract.

In this connection it is well to state that the term senile in connection with cataract is misleading, as from its use the inference is sometimes drawn that cataract is in some way inseparably connected with old age and for this reason incurable. It is true that, like many other processes associated with changes in the vascular system, all of which manifest themselves much more frequently in the aged, cataract is generally found in those of advanced years, but when we consider the numerous instances of its development in individuals less than forty years of age, and the enormous number of those who die of old age without developing cataract, it is apparent that the term senile, if employed at all, should be used with the understanding that it refers to the character of the other changes with which we generally expect to find cataract associated and which are more common in the aged, and not to any necessary association of age with cataract. Certain sclerotic changes undoubtedly take place in the lens, as in other tissues, in all old people; but if these are uniform

in character, and unassociated with unequal degenerative processes in various portions of the lens substance, they are not inconsistent with excellent vision, and while giving a somewhat smoky appearance to the lens, should not be called cataract.

From an experience extending over a period of more than seventeen years in one locality in which I have had an opportunity to follow the after-history of a large proportion of the cases observed, and from the records of many thousands of patients with various diseases, in whose cases I have made careful examinations of all portions of the crystalline lens while the pupil was fully dilated with a mydriatic, I unhesitatingly make the statement that a very large proportion of those changes which are generally recorded as "incipient cataract" are seen in relatively young people, and, under favorable circumstances, make little or no progress after existing for many years. I should, from my own experience, say that only a small proportion of the cases of incipient cataract observed ever come to maturity, and it is extremely probable that if we could thoroughly inspect every part of the eye we would also find in all of those which do come to maturity some progressive change in the uveal tract as a cause. While in a certain proportion of cases we must grant that the underlying cause of opacity of the crystalline lens remains undiscovered in spite of our best efforts, still among those who report for examination while the lens is sufficiently clear to allow of a careful study of the fundus, so large a number exhibit changes in the choroid coat indicating impaired nutrition of the lens that it is apparent that to this condition our treatment should be directed.

True opacity of the crystalline lens once formed is permanent. The extremely rare instances of apparent disappearance of cataract which have been reported are so exceptional that they must be regarded as clinical curiosities, if, indeed, they are not errors of observation. Certainly all careful observers are agreed that they form no basis for a system of treatment.

Our attention must be directed therefore not to the absorption of cataract, which is a delusion, but to such management and treatment as will tend to remove the causes, and so far as is practicable hold in check the advance of the opacity. A certain proportion of cases of immature, simple cataract are the result of temporary interference with the nutrition of the lens, due to some cause which has ceased to act, and are therefore non-progressive. To such patients, if the opacity is sufficient to seriously interfere with vision, we may in a few selected cases afford some relief by the use of a mild mydriatic, allowing the rays of

light to enter at the side of an opaque nucleus, by an iridectomy for the formation of an artificial pupil, or by resorting at once to extraction of the lens; the latter operation is, in my judgment, decidedly preferable to any of the procedures sometimes employed for the purpose of artificially ripening the cataract. These methods of treatment are not within the scope of this paper, which is intended to deal only with progressive, immature cataract in its early stages.

In treating a patient with immature progressive simple cataract, we should employ all of those agencies which may tend to prevent undue congestion of the uveal tract, and endeavor by all means to improve the general nutrition of the eyes by the correction of errors of refraction, relief from such work and exposure to extreme light and heat as will maintain a state of congestion of the choroid and retina, and in proper cases the administration of potassium iodide and other alteratives to overcome any low grade of choroiditis which may tend to gradually impair the nutrition of the lens.

Risley, in his able paper which appeared in 1889, called attention to the frequent occurrence in incipient cataract of "floating vitreous opacities, headaches, asthenopia, red eyelids, and chronic conjunctivitis of the congestive type," and since that time the common experience of ophthalmic surgeons has tended in large measure to confirm the results of his observations.

In the general treatment of such cases one must have constantly in mind the fact that the choroid and ciliary body, upon which the lens depends for its nutrition, are a part of the general vascular system, and that such diseases as manifest themselves in alterations in the walls of the blood-vessels, or in the condition of the blood itself, are peculiarly liable to result in disease of the choroidal and ciliary vessels, and later in impaired nutrition of the lens. The more chronic diseases, such as diabetes mellitus, the rheumatic or gouty diathesis, and especially atheroma and arteriocapillary sclerosis, are more commonly found associated with alterations in the lens than are the more acute affections, which may pass away before serious damage has been done to the cell structure. Treatment directed against these conditions may, of course, prove unavailing, but in some instances the degenerative processes may by careful treatment and judicious management be held in check for many years.

The employment of non-operative local therapeutic measures in the treatment of opacity of the crystalline lens, which in the past has been the subject of prolonged discussions, seems to have special charm for the victims of cataract; and in spite of the fact

that this is the favorite field of the charlatan, this is a subject worthy of our careful consideration. Electricity, stimulating solutions (often termed absorbents) instilled into the conjunctival sac, and massage have all been employed, and thousands of the unfortunate victims of cataract are at this time industriously making use of these agencies, and living in the hope and belief that they are gradually, very gradually, bringing about the absorption of their cataracts and restoring the light of heaven to their eyes, while gradually, in spite of all they can do, the disease advances, and they at last must sit in darkness or resort to the knife, for which they have such a dread.

Nothing could be more pitiful than the contemplation of this army of unfortunates and the dismal failure which awaits them. In one of the famous institutes in New York State devoted to the cure of cataract without operation, the management has resorted to the ingenious device of having a series of cheerful mottoes hanging on the walls to be read by the victims so long as they can see to decipher them, one of which, I have been told, is an injunction to be cheerful and avoid saying anything discouraging to the other patients. This, at least, is humane and should be commended.

While the quacks and knaves who impose upon those who are weak-minded enough to believe them build up fortunes by means of their false promises to bring about the absorption of opacities already formed, their hold upon the public is probably maintained by the fact that a large proportion of cataracts are non-progressive, or advance very slowly, and in these instances the massage and local stimulation, with attention to diet and general health, undoubtedly do sometimes hold in check processes which under other conditions might progress more rapidly. These patients having been duly impressed and convinced at the outset that without proper treatment they would soon be blind, after using the famous juice of a mysterious South American plant or some other equally inert substance for a sufficient length of time, are pronounced cured, and by their extravagant testimonials serve to draw in the more unfortunate ones who come expecting the immediate absorption of dense opacities. It is the old story that we hear told in all departments of medicine, and will hear so long as human nature is what it is. We should not allow ourselves to be disturbed by these weaknesses of our neighbors, but should keep our heads clear and our eyes open and learn what we can even from the quacks.

While of very limited application, it is not improbable that massage, applied with skill and by methods which have not yet

been fully developed, may at some future time be found to be one of the accepted means of improving the nutrition of the uveal tract, and thus holding in check the progress of degenerative changes in the crystalline lens, as it has been found to retard the progress of glaucoma. But on the other hand, it is very probable that massage, as generally practiced, as often leads to increase in opacity of the lens as to improvement in its nutrition.

I have made no attempt to use electricity in these cases, though I have seen a number of patients who have submitted to its use in the treatment of cataract; but neither from these cases nor from the literature of the subject have I been able to obtain positive evidence of its possessing any real value in improving the nutrition of the eye, and retarding the progress of lenticular opacity.

In conclusion I would say that, while undoubtedly many insidious processes on which the development of cataract depends may by judicious treatment be practically cured and the growth of the cataract arrested, there is no sufficient evidence that electricity or any other therapeutic agency has ever caused absorption of a well defined dense opacity of the crystalline lens.

Two plays have recently been placed upon the stage in Paris written by physicians. One of these, "L'Enquete," was written by Dr. Roger, an adjunct professor in the Faculty of Medicine. This play is presented at the Theatre Antoine. The plot depends upon the murder of a man by an epileptic during a seizure, and a total obliteration of this act from the memory of the murderer. The epileptic is a juge d'instruction, and it becomes his duty to inquire into the cause of death, a duty which he performs without having any idea that he has to do with his own act. During the course of the trial the judge is struck down by another attack. The other play, written by Dr. Bouchinet, medical officer to the baths of Royat, is a domestic drama known by the title of "Gertrude," and has no special medical features, though one of the characters is a physician. Another physician, Dr. Charles Richet, an eminent professor of physiology in the Faculty of Medicine of Paris, has written a new drama in verse which is shortly to be produced by Sarah Bernhardt. Professor Richet writes under the *nom de plume* of Charles Ephyre, and has already written several successful dramas.—*New York Medical Journal.*

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EDITORIAL ARTICLES.

THE WORK OF LORENZ.

The unfortunate way in which the daily press are accustomed to deal with matters medical has been exemplified in the treatment accorded the visit of a distinguished Austrian surgeon. Professor Lorenz has not at home won more than ordinary distinction as an orthopedic surgeon. The so-called bloodless method of reducing congenital hip-joint dislocation was not original with him, although he may justly claim to have made a large section of the medical profession familiar with its advantages. That it is the only method of treating this deformity, or that it is a suitable operation for many cases, is obviously untrue. The harmlessness of the operation is also not such as might be surmised from newspaper accounts of it. The chloroform fatalities in the cases Lorenz has himself reported are much in excess of ordinary numbers, and it is stated on reliable authority that out of the few cases operated upon by Dr. Lorenz in this country a goodly proportion exhibit unfortunate effects, which indicate the severity and violence of the methods employed.

Nevertheless, Lorenz is a great man; he has done much for orthopedic surgery, and the meager fees he carries back with him to Europe form an entirely insubstantial reward for his great accomplishments.

Dr. Lorenz will in future years find the newspaper accounts of his visit interesting reading, and deducting therefrom the hysterical gush, which must have annoyed and surprised him, he will find that his visit was appreciated, and was productive of increased interest in the important field of orthopedics, in which he is such an illustrious worker.

EDITORIAL NOTES.

Increase of the Length of Life.

According to the statistics recently issued by the Census Bureau it is shown that the age of the population is increasing from decade to decade. The results have been attained by computing the median instead of the average. The median is such an age that half its population is under and half over it. The median age of the total population in 1900 was 22.8, as compared with 21.9 in 1890. The statement says: "Many complex influences have coöperated in producing as a resultant this steady change in the age composition of the population. Three may be mentioned: the rapid progress of medical and sanitary science, which has tended to increase the average length of life; the decrease in the relative number of children born, which has made the earlier age periods less preponderant numerically in the total population; and the influx, especially since 1840, of great numbers of adult immigrants, increasing the number of the older age periods."

It would seem that the strenuous life which we are said to be leading at the present has not the deleterious effects which are generally imputed to it.

A Memorial to Virchow.

A movement is on foot in Germany to erect a statue at Berlin to the late Prof. Rudolph Virchow. Representatives of science and art irrespective of political parties have joined the committee constituted for this purpose, and an appeal will be made to all scientific men the world over to raise a sum sufficient for a suitable statue. It is to be hoped that the physicians of this country will promptly do their share toward bringing this movement to a successful issue; for no man during the past century has done more to advance medicine and the allied sciences than has Virchow.

The Contagiousness of Acute Rheumatism.

A German physician, Dr. Kellman, recently reported in the *Münch. Med. Woch.* a case which he considered of importance regarding the pathogenesis of acute rheumatism. In the latter

part of November, 1901, the patient, a young man of twenty-nine years, was taken ill with sore throat, fever, pain, and swelling in the knee-joints. Later there was abundant sweating. Shortly after this the mother of the patient, who had never had rheumatism before, was suddenly attacked by similar symptoms. Kellman states that he learned afterward that the mother had been in the habit of sleeping in the same bedclothes at night which the son had perspired into during the day. This theory as to the contagiousness of rheumatic fever has in only one or two instances heretofore been advanced, and it is doubtful if it can be absolutely proven that contagion could take place in such a manner; however, it is well worthy of further observation.

The Cocaine Habit Among the Negroes.

The cocaine habit among the negroes of the South has of late become alarmingly prevalent. The negroes of New Orleans found that the drug enabled them to perform more easily the extraordinarily severe work of loading and unloading steamboats. The high wages offered by the Mississippi River steamboat owners for the unloading of cargoes is said to have first prompted the negroes to use cocaine as a stimulant. They soon became aware that they could work for seventy hours at a stretch in rain, in cold, and in heat when under the influence of cocaine. This state of affairs is one that certainly calls for the attention of the authorities, and strenuous efforts should be put forth to stop the sale of this drug to the ignorant negro roustabouts of the South.

ITEMS AND NOTES.

INFLUENZA in England is reported as unusually severe.

THE cattle plague has again broken out in South Africa.

THE cholera epidemic in Egypt is declared to be practically at an end.

A BILL is now pending in Congress providing for fifty women nurses in the navy.

UP to the present time cholera in the Philippines has been responsible for 126,000 deaths.

THREE cases of bubonic plague are now under treatment in the Swinburne Island Quarantine Hospital in Lower New York Bay.

THE American Association for the Cure of Inebriety held its thirty-second annual meeting in Boston, Mass., December 18, 1902.

THE British Association for the Advancement of Science will hold its annual meeting in 1905 at Victoria Falls, on the Zambesi River.

THE House of Representatives has been asked for an appropriation of $75,000 for the construction of an army general hospital in Washington.

IT has been announced by the Austrian authorities that the chemical treatment of tobacco by the Gerold method does not free cigars from nicotine.

THE surgeon-general of the U. S. P. H. and H. M. service will soon call a conference of all the State boards of health to confer in regard to the plague.

THE government of the Argentine Republic is desirous of postponing a meeting of the Pan-American Medical Congress from June, 1903, to October, 1905.

THE committee for the prevention of tuberculosis appointed by the New York City Charity Organization Society has made arrangements for a series of free lectures on tuberculosis.

A SCHOLARSHIP has been founded by the Royal College of Edinburgh, having an annual value of $1000, tenable for two or three years, for original research in diseases of the thymus and other ductless glands.

THE secretary of the navy in his recent annual report to Congress recommends a permanent ambulance or hospital ship designed for hospital service only, and having a right to fly the flag of the Geneva Conference.

THE government physician at the Sac and Fox Indian agency in Oklahoma announces that a large majority of the tribe are afflicted with incurable diseases, and in all probability they will be extinct within the next few years.

THE new Register of the Johns Hopkins University shows that there are sixty-nine professors and instructors in the medical department. Two hundred and fifty-eight medical students and seventy-two physicians are attending special courses.

SENN HALL, which will ultimately constitute the east wing of a large structure extending from Harrison Street to the corner of Wood Street, Chicago, and which is to constitute the clinical building of Rush Medical College, was formally dedicated on December 17, Sir William H. Hingston, of Montreal, professor of clinical surgery at Lavalle University, being the orator of the occasion.

FROM San Francisco comes the intelligence of the death of Dr. J. R. Laine. Dr. Laine was at one time secretary of the California State Board of Health for a period of eight years, and he was well and favorably known to the medical profession of that State from San Diego to Eureka. For the past seven years he was medical expert for the Southern Pacific Railroad. He leaves a widow and one child.

ACCORDING to *American Medicine* a sanatorium for the treatment of pulmonary tuberculosis, located at Luray, Va., has the system of ventilation so arranged that all the air for the institution is supplied from the underground caverns. It is claimed that the air of limestone caverns has all the characteristics of the pure rarefied air of high altitudes, and that an investigation of the air in caverns supplying the sanatorium showed it to be of uniform temperature, remarkably pure and free from all germs and dust particles, and especially adapted for the treatment of pulmonary complaints.

Dr. Eugene Wasdin and Dr. H. D. Geddings, of the United States Marine Hospital and Public Health Service, were appointed a committee to investigate the theory of Sanarelli concerning yellow fever in 1897. For the services performed by this committee its members were granted decorations by the Italian government in 1900. These decorations have been in the hands of the United States government since the time, and under the omnibus bill passed by the House of Congress on December 15, permission was granted to Dr. Wasdin and his associate, Dr. Geddings, to accept the decorations. This bill has already passed the Senate at a previous session, and now only awaits the signature of the President.

The opticians of New York propose to make another effort to induce the legislature to create a board of examiners in optometry, without a license from which it shall be illegal to practice optometry. This is defined as "the employment of subjective and objective mechanical means to determine the accommodative and refractive states of the eye, and the scope of its functions in general, or the act of adapting glasses to the eye by using such skilled means as will determine their choice." Physicians duly licensed to practice medicine in the State are to be exempt from the provisions of the proposed act. Others who practice optometry without a license will be adjudged guilty of a misdemeanor.—*Medical Review.*

An official crusade is about to be instituted in France against the sale of various poisonous essential oils, especially those used in the manufacture of liqueurs and cordials. The prime minister, M. Combes, himself a physician, some time ago, according to the *Medical Record,* officially asked the Academy of Medicine to formulate a list of poisonous essences contained in liqueurs and cordials, intending when the list is received to submit a bill to the Chamber of Deputies restricting the consumption of these compounds, which, he says, are threatening the vitality of the French race. Liqueurs such as absinthe, chartreuse, and the like, are principally aimed at. M. Laborde, who is the chairman of the committee appointed by the academy to comply with M. Combes's request, favors the absolute prohibition of the sale of all the poisonous essential oils except by druggists on physicians' prescriptions. The leading distillers are said to have raised a fund of $200,000 to avert the contemplated legislation.

NEW PUBLICATIONS.

CLINICAL SURGERY.

The author of this work has presented the profession with a manual of real value. It is most admirably compiled, and it is doubtful if the magnificent plates with which it is adorned have ever been equaled in the history of surgery. They furnish actual clinical instruction, which can scarcely be excelled in the close and intimate contact of the amphitheater. The text is written in a clear and intelligible manner, there being a total absence of all the obfuscation that usually comes from historical retrospect in operative procedures. For a surgeon who wishes to do an operation in the most precise and direct way, Dr. Ochsner's guide will be found one to which he can unreservedly entrust himself. The work is creditable to the author and publisher alike.

Clinical Surgery. For the Instruction of Practitioners and Students of Surgery. By A. J. Ochsner, B.S., F.R.M.S., M.D. Chicago: Cleveland Press.

REFERENCE HANDBOOK OF THE MEDICAL SCIENCES.

The new volume of this encyclopedic handbook takes us from Inflammation to Mosquito. The first and last articles of the volume are in themselves an adequate testimonial to the great value of the work. The first embodies all the newer hematological conceptions regarding pathology, and the last all the hematozoön theories with which modern pathology is so much influenced. The spirit of the work is excellent, and the investigator will find its pages the storehouse of research. For the busy practitioner the reference handbook will be found an invaluable resource.

A Reference Handbook of the Medical Sciences. By Various Writers. A New Edition, completely Revised and Rewritten. Edited by Albert H. Buck, M.D., New York City. Volume V. New York: William Wood & Co., 1902.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Successful Splenectomy During Typhoid Fever.

Thomas Ashby (*Amer. Gynec.*, August, 1902) reports a case of splenectomy for wandering spleen complicated with typhoid fever. The patient, a single woman, aged twenty-two, had suffered from several attacks of malarial fever. The spleen had undergone hypertrophy and dragged so heavily on its attachments that it became displaced into the pelvis and impacted in that cavity behind the uterus. The patient contracted typhoid fever, and pelvic pains set in. Her doctor detected a large mass in the pelvis extending well above the brim, and very tender. As there was high temperature he came to the conclusion that the mass was an inflammatory tumor. When he examined her there were no typical symptoms of typhoid fever, and no cases of that disease in the neighborhood of the patient's home. He at once sent her into a hospital. Ashby detected the physical signs of an inflammatory mass in the pelvis. There was pain on pressure, a doughy sensation to the touch, and the skin over the region of the tumor was so red and shiny that it seemed as if a suppurating mass was present and ready to burst through the skin.

Believing that there was a large collection of pus to be let out, Ashby prepared for an abdominal operation. On the next day, when the patient was under the anesthetic, the pelvic mass could be distinguished on palpation with greater precision; in fact, it felt like an ovarian cyst or soft uterine fibroid. As soon as an exploratory incision was made an enlarged spleen was discovered. Its size and the length and weakness of its ligaments precluded any thought of attempting to fix it in its normal position. The only safe course was to remove the organ, and this was effected without the least difficulty, as its pedicle at the point of attachment under the diaphragm was as thin as a little finger. The pedicle was ligatured in section, and the stump well covered with peritoneum.

There was little shock after the operation, but remarkable and alarming symptoms developed, and the erratic course of the temperature could not be accounted for until the typical typhoid reaction was obtained about the sixth day. Thenceforward the typhoid condition was regarded as the primary disease, and

treated accordingly; the fever ran a regular course, and convalescence was uneventful. The patient's health after her recovery was better than prior to the attack of typhoid fever. It is noteworthy that there were no sequelæ traceable to the operation itself. The slightness of constitutional disturbance when an abdominal tumor free from adhesions or inflammatory changes is removed with aseptic precautions is well illustrated by the course of this case, where so grave a complication as typhoid fever existed.

With What Frequency Do We Have Atypical Dulness in the Right Iliac Fossa?

Riedel (*Berliner klin. Wochenschrift,* 1902, No. 31) in an estimable and interesting article shows that neither typhoid nor cholera exhibit as high a death-rate as appendicitis, and that variable symptoms often lead to a wrong diagnosis, and prevent the operative interference which may mean life to the patient. Numerous cases of appendicitis take an atypical course, and in only a portion of them (30 per cent) do we meet with a typical dulness above Poupart's ligament. If no old adhesions are present there is no infiltration, but if such be the case the appendix will be found fixed. Out of 252 cases under his own observation, 124 gave the old typical picture of typhlitis, whilst in 128 cases no physical signs could be elicited. In many instances the appendix lay in front of the cæcum extending up to the border of the liver, or (60 cases) toward the median line, the umbilicus, the bladder, or the true pelvis. Patients with laterally located well encapsulated appendices with adhesions show as little external evidence as those with retrocæcal infiltrations. The most dangerous lesion is that situated toward the median line, as here a perforation is most likely to occur. Dulness is not characteristic of appendicitis, because, first, it may be absent; secondly, it may not be demonstrable; or it may disappear when air enters into a perforated abscess, and the clearing up of the dulness is often taken for the beginning of absorption.

In conclusion he advocates early operation, before perforation, and in fact before abscess formation takes place, holding that the removal of the danger of an erroneous diagnosis or of a chronically inflamed appendix can only be of benefit to the patient. As appendicitis usually affects the male sex at from six to twenty-five years of age, one should always bear in mind the possibility of this disease in case a usually healthy boy complains of pain in the stomach, refuses to eat, and has a rise of temperature.

Tuberculous Tumor in the Spinal Cord.

Hunter (*Brain,* summer, 1902) relates a case exhibiting the rare tuberculous focus in the substance of the spinal cord. A child aged two years on admission to hospital exhibited the following symptoms: The head was turned to the left shoulder, and there was some rigidity of the muscles of the left side of the neck; the right arm was paralyzed and flaccid without wasting; the left arm was capable of voluntary movements, but there was some muscular rigidity. The right leg exhibited no voluntary movements, the left a slight degree of these; on both sides the knee-jerks were exaggerated and ankle clonus was present. At the necropsy typical basal tuberculous meningitis was found, but in addition, in the cervical region of the cord, was a swelling occupying five segments, from the second to the seventh cervical. This proved to consist of an oval tuberculous node, occupying the center of the cord, with but a narrow rim of cord tissue around it; it had apparently originated in the right posterior horn.

Drainage in Abdominal Section.

The conditions requiring drainage have been summed up by Stuart McGuire (*Virginia Medical Semi-Monthly,* Nov. 21, 1902) as follows: (1) In uncontrollable bleeding, as after enucleation of an intraligamentous cyst. (2) When profuse serous transudation is probable, as after the removal of a large adherent ovarian tumor. (3) When localized collections of pus are found, as in the case of an appendiceal abscess. (4) When acute general peritonitis exists. (5) When protective adhesions are desired, as in drainage of the gall-bladder. (6) When secondary infection is feared, as in some cases of intestinal lesions. He describes the different forms of drains, including his own, a soft gum tube surrounded by numerous strands of cordine in a casing of thin rubber tube. The inner tube projects beyond the cordine, and the latter beyond the other tube.

MEDICINE.

Trypanosoma Occurring in the Blood of Man.

Dr. Patrick Manson (*Lancet,* Nov. 22, 1902) reports two cases of trypanosoma occurring in the blood of man. The first case was that of a man from Gambia, who had suffered from fever having a diurnal periodicity, low in the morning and high

at night, which did not yield to treatment by quinine. He was very anemic, had an enlarged spleen, an enlarged liver, and a well marked erythema multiforme scattered over the trunk and limbs. His blood contained the protozoön trypanosoma.

The second case was that of a female, who had resided in the Congo. She had fever and enlargement of the spleen, edema of the face, and erythema multiforme. On examination of the blood, at first no parasites were found; later, however, numerous parasites were discovered.

Dr. Manson says that the disease cannot be readily communicated to man, and is probably not the ordinary "fly disease," since blood injected into animals susceptible to it did not give rise to the disease.

Physiology and General Pathology of Emesis.

W. Janowski (*Sammlung klin. Vorträge,* No. 333), summarizing everything known of the physiology and general pathology in emesis, gives some of the results of his own experiments. He found that the gastric muscles alone possessed the ability to perform the act without the assistance of the abdominal muscles and diaphragm, although the latter take an active part in emesis. Contrary to most authors he shows that the pylorus during the act of vomiting is not always closed, but opens and closes rhythmically, otherwise we would not find the contents of the small intestine in the dejecta. While the usual assumption was that the vagus must be intact in order to produce vomiting, the author shows by cutting of it in the dog that it has a varied influence on the act, which the use of emetics and other experiments confirmed. The easy vomiting of children is not to be explained to be due to the horizontal position of the stomach, but rather to the greater sensitiveness of their nervous system.

Atonic Motor Insufficiency and Dilatation of the Stomach.

Robert Saundby (*British Medical Journal,* Nov. 29, 1902) draws the following conclusions in regard to atonic motor insufficiency and dilatation of the stomach:

1. That atonic dilatation of the stomach is a common condition; that it occurs about twice as often in women as in men, and most frequently between the ages of twenty and fifty; and that it is ten times more common than dilatation from obstruction, which generally occurs after twenty years of age.

2. That it is caused by neurasthenia or by any prolonged debilitating illness which may set up neurasthenia.

3. That there are no characteristic symptoms, and no correspondence exists between the amount of dilatation and the severity of the symptoms.

4. That the diagnosis can in the great majority of cases only be made by the distention of the stomach by CO_2, evolved from 120 grains of sodium bicarbonate and 90 grains of tartaric or citric acid.

5. That the prognosis does not depend upon the extent of dilatation, but rather upon the duration of the symptoms, the general health of the patient, and the effect of treatment.

6. The treatment must be mainly that of neurasthenia, supplemented by the use of such drugs and diet as may be indicated by complications—for example, gastritis.

7. Gastroenterostomy often fails to relieve the cases.

Nitrogen Excretion in Pneumonia, and Its Relation to Resolution.

In cases of pneumonia, according to H. W. Cook *(Johns Hopkins Hospital Bulletin,* December, 1902), a surplus amount of nitrogen must be excreted during the days of resolution that will correspond at the least to the original quantity of exudate poured into the involved lung. In most cases there is more, the rest representing in great part a continuation of the formation and an absorption of inflammatory exudation, plus other tissue destruction.

In cases of marked delay in resolution the continued high nitrogen output indicates a continuation of the local inflammatory process, so that in those cases of several months' persistence we might speak of the chronic pneumonia.

In cases of rapid resolution the leucocytosis curve follows the curve of nitrogen excretion with a very striking parallelism, and would seem to point to a causal relation between leucocytes and resolution.

Paratyphoid Fever.

Paracolon infections, according to N. E. Brill (*Medical Record,* Nov. 29, 1902), are not very rare. Thirty-eight cases have been reported during the last year. The infection is a systemic one, and its symptomatology is like that of typhoid fever, from which it can only be differentiated absolutely by the

agglutination and cultural tests. The differentiation clinically between the two infections most likely depends upon the superimposed localization of the typhoid infective agent in the intestines in typhoid fever, and its probable absence there in paracolon infections.

The belief that typhoid fever is a specific disease has existed so long that it would be iconoclastic to disturb its place in medical nosology. The fact, however, remains that typhoid fever is not clinically a specific entity; that the organisms besides the Eberth-Gaffky bacillus may produce the clinical symptoms of typhoid fever.

The Significance of Cigars and Cigar-stubs in Tuberculosis.

L. Peserico (*Archiv für Hygiene*) had patients, whose sputum contained large numbers of tubercle bacilli, smoke cigars and cigarettes, and then inoculated the stubs into guinea-pigs. Some of the stubs were inoculated directly and others after a lapse of time. He also treated guinea-pigs with fresh, newly bought cigars and stubs found on the streets in this way. The result showed that fifty per cent of the animals which received stubs from the tubercular smoker died of tuberculosis, showing that the disease can be transmitted in this way. The stubs preserved in a dry state retained their virulence for a long time; but when kept moist they caused no infection in ten days. Fresh cigars, and cigar-stubs gathered from the streets, did not produce an infection; the only bacteria found were the potato bacillus, some pyogenic cocci, and molds.

Symptomatology of the Gastrointestinal Disturbances in Arteriosclerosis.

How sclerosis of the coronary arteries producing an ischemia of the myocardium can reflexly produce an acute gastrointestinal disturbance is not yet explained, and those suffering from sclerosis of the abdominal aorta are much more easily affected this way, says Neusser (*Wiener klin. Wochenschrift,* 1902, No. 38). As an example of the abdominal form in angina he cites the clinical history of a 48-year-old man who suffered from gastralgia after severe exertion. Severe attacks began with burning, deeply located pains in the stomach, which radiated over the anterior chest wall to the manubrium sterni, accompanied by a feeling of compression of the larynx and an exces-

sive flow of saliva. In exceptional attacks the pain extended between the shoulder-blades with a feeling of constriction around the waist.

The Absence of the Patellar Reflex in Croupous Pneumonia.

M. Pfaundler (*Münch. med. Wochenschrift,* 1902, No. 29) finding the patellar reflex repeatedly absent in cases of pneumonia, looked up the clinical histories on this point for the last few years. Out of 200 cases the reflex was absent in 55 (27.5 per cent). Great depression or high temperatures seemed not to have any bearing on this symptom. The author holds that it is due to a toxic influence exerted on the reflex circle. In other forms of pneumonia he did not find this symptom. He concludes that in genuine croupous pneumonia of children we often find the patellar reflex absent or reduced, sometimes before the appearance of the local symptoms. This symptom occurs oftener than herpes labialis, and in positive cases can be of diagnostic value.

THERAPEUTICS.

The Use of Cinnamic Acid and Sodium Cinnamate in the Treatment of Tuberculosis.

W. J. Robinson (*Merck's Archives,* December, 1902) makes a complete résumé of the literature of the subject and draws the following conclusions:

1. To regard sodium cinnamate as a specific in tuberculosis is absurd. Neither Landerer nor the most ardent of his disciples, Cantrowitz, claims it to be such, and only those who have not given the subject any study can bestow upon the drug such title.

2. The drug is probably a useful adjuvant in the treatment of tuberculosis in the first stage.

3. The doses must be small to begin with, and must be increased very gradually. This is a very important point, on which Landerer insists with particular emphasis. He and Cantrowitz ascribe most of the bad results reported by other investigators to the fact that they used too large doses.

4. The drug is contraindicated in cases inclined to hemorrhages, or too soon after a hemorrhage.

5. It should not be used when the temperature is above 101° F.

6. Should a rise of temperature follow an injection it is evidence that the dose was too large, and the next dose should be diminished to three-fourths or one-half.

7. Professor Landerer is a reliable and trustworthy observer, and there is not the slightest justification for mistrusting his statements and reports. But it must be borne in mind that practically similar results are now obtained in most high-class sanatoria where sodium cinnamate does not enter into the treatment.

8. The treatment with sodium cinnamate is harmless, provided it is practiced strictly according to the rules laid down by Landerer. Too large doses may, by causing an excessive serous exudation (leucocytosis) around the tubercular foci, carry some tubercle bacilli into the circulation.

9. Given by mouth, the dose of sodium cinnamate may be quite large, two or three grains. Whether it has any influence on the tuberculous process when thus administered remains to be shown. Cantrowitz is very skeptical in this respect. He says that when given per os it is probably eliminated in the urine, perhaps in the form of hippuric acid.

10. Taken all in all, the author's impression of sodium cinnamate as a curative agent in tuberculosis is a negative one. It is probably useful symptomatically, but even here he prefers creosote and its derivatives.

It is a more grateful task to report favorably upon a drug; but what the profession and humanity need are unbiased, truthful reports and impressions, whether favorable or unfavorable.

The Treatment of Nervous Dyspepsia.

It is desirable in all cases belonging to this variety of dyspepsia, according to G. Rankin (*British Medical Journal,* Nov. 29, 1902), to increase the quantity and variety of food as quickly as possible, and it is especially necessary to get the patient to take as much fat in a digestible form as he is able to assimilate. The stomach discomfort depends upon nerve exhaustion, and is only a local manifestation of a constitutional state, which will not benefit from the routine plan of treatment by acid or alkalies. In this, however, as in other forms of indigestion, fermentative processes play a considerable part in the causation of the patient's discomfort, and again, therefore, antiseptics ought to be administered as part of the medication. The drugs which the author

has found to be most reliable for affording relief are zinc valerianate and arsenic. The powerful taste of the valerian is best concealed by administration in capsule form, and may be ordered according to this formula: Zinc valerianate, 3 grains; pure carbolic acid, 2 grains; arsenious acid, 1/40 grain; extract of cannabis indica, 1/4 grain. One capsule should be taken after food three times a day. When sleep is much broken at night, and especially if gastralgic attacks are the disturbing cause, relief will be afforded by 30 grains of sodium bromide, with 15 grains of antipyrin taken on going to bed. Rest from mental and physical work is imperative, and there is no form of dyspepsia which benefits so much from change of surroundings, a stimulating and sunny climate, cheerful society, massage, and hydrotherapy.

Treatment of Tubercular Glands of the Neck.

Leonard Freeman (*Journal of the American Medical Association,* Dec. 6, 1902) says that general treatment, especially hygiene, is of the utmost importance, both in the cure of incipient trouble and in the prevention of relapses following operations on more advanced cases, most recurrences being due to neglect of such measures.

Residence at the seashore has long been recognized as of great benefit; but there is reason to believe that a high and dry climate, such as that of Colorado, with its rarefied, stimulating atmosphere and abundant sunshine, possesses superior advantages.

A point of extreme importance in local treatment is to abolish sources of infection in the teeth, tonsils, nose, ear, scalp, etc., and neglect of this is apt to result in failure.

Non-operative treatment is often of doubtful utility, except in the beginning of the disease.

Pulmonary involvement does not contraindicate operation, at least in Colorado, except in advanced cases.

Curettement is applicable to sinuses, tubercular ulcers of the skin, and where complete removal would be attended by too much risk. In all other instances a thorough operation should be done.

The size and shape of the incision should be adapted to the particular case. It should be free enough to permit thoroughness and safety.

The chance of permanent cure following operation is probably better in Colorado than in lower and less favorable altitudes.

A Corrective for Injections of Mercury and Iodides.

Bretonneau (*Annales de Thér. Dermatolog. et Syphiligraphique*) recommends the employment of alkaline benzoates, preferably the benzoate of ammonium, in order to prevent the occurrence of iodism and hydrargyism. It is best given in cachets containing 0.25 gramme (about three to four grains), of which four to eight may be given per day. The author suggests that the antiseptic action of the salt and its eliminative action may be the causes of the beneficial effects it produces.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

What Means Other than Operation Have We for Preventing and Combating Inflammation of the Mastoid Cells?

Dr. Samuel Theobald (*Archives of Otology*, October, 1902) says that in the treatment of aural diseases, especially of otitis media and mastoiditis interna, too great reliance is placed upon local measures, operative and otherwise, and too little thought given to internal medication. For instance, the antiphlogistic value of energetic purgation, especially when calomel in liberal proportion forms an ingredient of the purgative employed; the efficiency of pyrophosphate of soda administered in full doses (twenty grains every two hours for an adult, ten to fifteen grains as often for a child), in controlling suppurative processes, whether located in the ear or elsewhere; and the value of mercury, given in such manner as to produce its specific effect upon the system, in the early stages of inflammation of the mastoid cells. This should not be a matter of surprise, since the membrane which lines these cells is periosteal as well as mucous, and an inflammation beginning here as a simple catarrhal process may soon become an actual periostitis.

In the early stages of otitis media, an application should be made to the ear of an oily solution of the alkaloids of atropine and cocaine (atropia gr. ij, cocaine gr. iv, ol. amyg. dulc. ss, six to ten drops to be poured into the ear three or four times in twenty-four hours), and unless distinctly contraindicated, a

brisk calomel purge; when necessary, these remedies can be followed up with pyrophosphate of soda in the doses mentioned. In this way the attack can frequently be cut short before the stage is reached when a spontaneous perforation of the tympanic membrane may be expected or an incision required. When otorrhea is present, the ear is syringed two or three times a day with a saturated solution of boracic acid, or a 1-to-8000 or 1-to-4000 sublimate solution, the former in acute and the latter in chronic otitis media.

In the early stage of mastoiditis interna, the same measures are employed, and in addition mercury is given in suitable doses instead of, or after, the pyrophosphate of soda. These energetic measures frequently suffice to control the inflammation and do away with the necessity of operation upon the mastoid process, if resorted to in the incipient stage of the attack. When the mastoiditis is due to a pneumococcus or a streptococcus infection, the progress is, of course, less favorable, and an operation more likely to be required.

When to Operate for Ripe Senile Cataract, the Other Eye Possessing Useful Vision.

George F. Keiper (*Annals of Ophthalmology*, October, 1902) desires to urge the removal of the ripe senile cataractous lens, irrespective of the condition of the other one. If the operation is ultimately successful the advantages gained are:

1. The patient has a large field of vision. This is a source of protection against accident whose cause may originate from the otherwise blind side.

2. The avoidance of the dangers and difficulties of extracting an overripe lens.

3. Continuous vision, because the other lens is usually affected.

4. The patient possesses more comfort with vision in both eyes.

5. The patient's appearance is better.

The objections urged against the removal of the ripe cataractous lens when the other eye possesses useful vision are mainly from the standpoint of the difficulty of correcting satisfactorily the difference of refraction (anisometropia). No attempt should be made to correct the aphakic eye until the vision of the other eye is so seriously impaired as to be almost useless.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Actinomycosis Hominis.

In an article published in the *Bulletin of the Johns Hopkins Hospital* for November, 1902, Wm. G. Erving says in part of actinomycosis hominis in America:

Infection.—Usually there is no definite history of infection. The disease, as occurring in man, is probably in a large majority of cases contracted from animals, especially cattle, in which actinomycosis, usually known under the name of "lumpy jaw" or "big jaw," is not uncommon; or in common with cattle, from grain.

In six of the cases there was a definite history of caring for an animal suffering from "lumpy jaw" during a considerable period preceding the manifestation of the disease in the patient.

In several cases, too, there was a history of habitually chewing grain or straws. The fact that the streptothrix actinomycotica habitually gains entrance to the human body by way of the mouth or the nose sufficiently accounts for the large proportion of cervicofacial cases, 53 per cent, reported in this series.

In eighteen of these cases (cervicofacial) the entrance of the organism could be located definitely in a carious tooth, a fragment of grain being found embedded in the cavity in one instance; while in three others entrance was gained through a wound, caused in the different cases by a clamp for artificial teeth, a toothpick broken off beneath the tongue and not removed, and an oat straw in the same location. In still another instance the nucleus of an actinomycotic abscess in the submaxillary region was found to be the fragments of a beetle.

Of the four skin cases, there was an external wound in two, while in a third the patient was accustomed to sleep in the stable straw, with his back and shoulders, the seat of the lesion, unprotected.

Diagnosis.—Notwithstanding the fact that many of the symptoms of actinomycosis are very characteristic of that disease, diagnosis should never be positive without the finding of the organism—the ray fungus. This occurs in the sulphur granules of the abscess contents, or much less frequently in the walls of the cavity. In man all three characteristic elements are found, but the long branching threads and the coccus-like bodies

are more often seen than the bulbous processes, and are sufficient for establishing a diagnosis.

The presence of bodies in a discharge resembling sulphur granules, observed macroscopically, is not sufficient for a diagnosis, as under the microscope these are frequently found to be clumps of bacteria, tuberculous débris, etc. The cultivation of the organism, which is an anaërobe, is attended with difficulty and growth is slow.

Treatment.—The drug (potassium iodide) has no specific action on the ray fungus, as this has been found in the body tissues after months of systematic potassium iodide treatment. Its use is generally recommended in connection with free incision and drainage of the actinomycotic abscesses as they appear, when the best results are seen. The action of the potassium iodide, as stated by Lieblein, is to bring about a solution of the cellular infiltration about the abscess cavity, and the consequent discharge of the ray fungus, in imitation of nature's own method of healing.

Porter, of Boston, in his report of eight cases occurring in his own service, grants that the drug "has distinctly influenced some cases for good and should be used in connection with the local (surgical) treatment." He advises, notwithstanding, the complete excision of the affected tissues wherever possible, a conclusion much in accordance with that drawn from results obtained at the Johns Hopkins Hospital.

The Pathological Changes in the Skin Produced by the Rays from a Finsen Lamp.

Before the Section on Dermatology of the British Medical Association (reported in the *British Medical Journal,* October, 1902), J. M. H. MacLeod, M.R.P., said in conclusion:

1. That the action of the actinic rays from an arc lamp on the granuloma of lupus is essentially destructive, and that this destructive process is indirectly produced and is simply the result of an ordinary inflammatory reaction.

2. That the effect of the rays on the surrounding healthy tissue in the neighborhood of a patch of lupus may be safely exposed to them without subsequent injury and scarring.

3. That the destructive process, if the rays are judiciously employed, is not of such an intensity as to prevent subsequent repair, and a few days after it has reached its acme a process of construction sets in similar to that which takes place in the healing of inflammation.

4. That the process of construction is capable of replacing the destroyed granuloma with healthy fibrous tissue, forming a pliable scar, and the epidermis completely recovers from the edema caused by the action of the rays. Hence from the histological standpoint the treatment of lupus and other granulomatous affections of the skin by the actinic rays is an ideal one.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Displacement of the Gravid Uterus.

Allwood, Jamaica (*British Medical Journal,* Sept. 13, 1902), reports an extraordinary displacement of the gravid uterus. The patient, a young primipara, stated that she was straining at stool when she felt her "body come down." There was a large perineal tumor, over which the skin was tightly stretched like a thin membrane. The vulva was edematous, and the cervix uteri, also edematous, was protruded through the lower part, while the upper part was occupied by a prolapsed portion of the bladder. There was prolapse of the rectum, and the fundus uteri, covered by the anterior wall of the rectum, protruded through the anus, which was widely distended. The uterus had therefore prolapsed, and, describing more than a quarter of a circle, occupied a horizontal position parallel with the plane of the perineum. The patient was chloroformed and the uterus replaced with great difficulty, the hand having to pass up into the rectum to carry the fundus uteri over the sacral promontory. In order to keep it in place the vagina and rectum had to be packed with lint and the legs tied together. When reduction was effected it was found that she was about four months pregnant. She did not abort.

The Surgical Treatment of Cancer of the Uterus.

Jonnesco (Buchard) at the recent Fourth International Congress at Rome (*British Gynecological Journal,* November, 1902), after describing his own modification of Wertheim's operation, summarized the question as follows:

(1) The surgical treatment of cancer of the uterus offers

sufficiently satisfactory results, prolonging the life of the patient, and in some instances even giving complete cure. (2) The operation of election is the one that will permit the total ablation of the uterus, of its adnexa, of the cellular tissue, and of the lymphatic glands, pelvic, iliac, and lower lumbar. (3) The vaginal way does not permit this and should be abandoned, or reserved as merely a partial or palliative operation. (4) The abdominal way alone permits ample exeresis, and should be adopted whenever the complete operation can be attempted. (5) Operations done even by that way are insufficient and merely palliative unless the evacuation is complete. (6) Total abdominal castration, followed by complete dissection of the pelvis, the iliac fossæ, and the lumbar region, is an operation at once logical, possible, benignant, easy, and efficacious. It is the one that should be preferred. (7) It should be carried out unless the disease is limited, and clinically and during the course of the operation it appears to be possible to cut out all the diseased parts and not to leave any infiltrated tissue or lymphatic glands. (8) Diffuse uterine cancer does not admit of more than palliative treatment. (9) The possibility of operating in the earliest stage of the development of cancer is an indispensable condition for the success of surgical treatment.

Are Ventrofixation and Ventrosuspension of the Uterus Justifiable Operations.

H. J. Kreutzmann (*American Gynecology,* October, 1902) says that it may be said that occasionally it is right to propose surgical rectification of a backward displaced uterus, fixed or movable. Such surgical rectification must be absolutely devoid of danger to the life and health of the patient, immediate and remote. In women of child-bearing age it must be free from danger of interfering in the least with the normal progress of pregnancy and delivery. Ventrofixation and ventrosuspension of the uterus, as usually performed, are not thus devoid of danger to life and health, nor are they free from menace to normal delivery. In vaginal fixation (in non-parous women) and in shortening the round ligaments (by either the vaginal, intra-abdominal, or inguinal route) we have at our disposal operations which, if properly selected, combine efficiency with absolute freedom from danger.

THE MEDICAL AGE

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ORIGINAL CONTRIBUTIONS.

THE FORMS OF PARALYSIS ASSOCIATED WITH EPILEPSY.

BY ROBERT HOWLAND CHASE, A.M., M.D.,

Superintendent of Friends' Asylum for the Insane, Philadelphia.

When paralysis is associated with epilepsy it generally assumes one of three forms: (1) Paralysis of functional nature, or postepileptic paralysis; (2) persistent paralysis following a fit in a confirmed epileptic; and (3) a form of paralysis variously described under the terms epileptic hemiplegia, posthemiplegic epilepsy, and spastic paralysis of childhood.

The first and most common form—postepileptic paralysis—is only a temporary weakness of an arm or leg, or of both, of one side, immediately following an epileptic fit. According to the degree of the paralysis it passes off in variable periods of a few hours, a few days, or in as many weeks. Instead of affecting the limbs some slight disturbance of speech may occur; in other instances it may assume the form of temporary aphasia. On account of the transitory nature of this kind of motor disturbance, it is regarded as simply functional in character; there is evidence of no rupture of structural continuity. It is in this respect widely separated from the other two forms of paralysis, which are invariably due to organic lesion of the brain. This form of motor weakness that we are speaking of takes place more frequently after convulsions which are unilateral than after those of the bilateral type. The weakness is also usually greater in the arm than in the leg. The cause of this form of paralysis is ascribed by Hughlings Jackson and others to the exhaustion of the cortical cells in the motor area of the brain, in consequence of the explosive discharge of their energy in the convulsion. As an example of postepileptic hemiplegia, the following case under treatment may be cited:

J. H——, male, aged thirteen years. His father was very intemperate prior to the birth of the child. The patient was seized with idiopathic epilepsy at the age of thirteen months, and it has continued to the present time. Recently, after an unusually severe attack of convulsions, it was found that the left arm and leg were paralyzed. Improvement began almost at once in the disabled members, and now, after six weeks' duration, the paralysis has nearly disappeared. In another month the functions of the parts will probably be nearly restored.

The second form, persistent paralysis following a fit in a confirmed epileptic, is, in a word, nothing more nor less than hemiplegia from cerebral hemorrhage, the result of vascular strain during the fit. As this accident is rare, and does not differ from ordinary apoplexy in the non-epileptic, it need not further claim our attention.

The third variety, posthemiplegic epilepsy, is practically the most important of the three forms enumerated, and constitutes a considerable proportion of the cases of chronic convulsive disease. Hemiplegia, occurring at any period of life, may be followed by convulsions, but as this sequel is much more liable to happen when the paralysis begins in early life—at least in two-thirds of these cases hemiplegia comes on under five years of age—the disease has been termed by some spastic hemiplegia of childhood. Girls are attacked more frequently than boys; but with those in whom the onset is after twenty years of age, the preponderance is with males. A peculiar feature of the disease, also, is that in cases where it dates from the first five years of life the hemiplegia is most likely to involve the left side, but if it comes on after five years of age, one side is as liable as the other to become the seat of disease.

However bright the child may have been previous to its attack, it always leaves grave mental defect. This form of hemiplegia is always associated with more or less enfeeblement of the mind. Precocity, in this as in many other nervous diseases, appears to predispose rather than exempt. It may further be pointed out that after the first series of convulsions which usher in the paralysis, the subject may be free from fits for a long time; but they are almost sure to return sooner or later, and settle into confirmed and persistent epilepsy. That an occasional exception to the rule occurs only proves it, and is as surprising as the exemption from insanity when the heredity is very strong. The inflammable mass only needs the match to awaken it into life. If epilepsy does not immediately supervene at the start, it is most likely to do so between the ages of seven and fifteen years. Some-

times it is deferred even to middle life. In about half the cases epilepsy dates from the stroke of hemiplegia. In about one-sixth of the cases the interval is more than five years. It can be safely said that if a convulsion does not recur in a few days, the interval is likely to be over a year. The determining or exciting cause which establishes the epilepsy is often due to some profound impression on the life and health of the child, such as first or second dentition, puberty, whooping-cough, or one of the eruptive diseases of childhood. Again, when the hemiplegia occurs late in life the interval between the onset of the hemiplegia and the establishment of the epilepsy is rarely of long duration; in fact, it usually supervenes at once. In the early history of a case the convulsions are confined to the paralyzed side, beginning in the arm and extending to the face and leg. In the old and well established cases, on the contrary, the fit, beginning with a unilateral aura, extends beyond the affected side to well marked general convulsions.

The condition of the paralyzed limbs varies. In most cases a considerable degree of paralysis affects both the arm and leg. The face is less likely to be affected, and in the tongue it is often absent. When the onset is in early life, the leg frequently recovers almost entirely, but the paralysis of the arm is more permanently seated. It is observed in the cases of infancy and childhood that there is an arrest of development of the paralyzed limbs. The length of the bones is perceptibly shorter, and the circumference of the extremities does not reach the measurements of the sound side. This arrested growth frequently extends to the superior and inferior maxillary bones, and causes a peculiar asymmetry between the two sides of the face. In most of the cases of posthemiplegic epilepsy, sensation on the paralyzed side is normal.

The following are some illustrative cases of posthemiplegic epilepsy:

B. R——, male, aged twenty-eight years, has been under observation for about two years. The patient is well developed and healthy in appearance. Weight 128 pounds, and height 5 feet 6½ inches. He has a bright and pleasant countenance, although there is evidence of slight enfeeblement of the mental faculties. He is a painter by trade, and has attained fair proficiency in it and in school education. His head measures 21½ inches in circumference, and 7¼ inches in the longitudinal and 5¼ inches in the transverse diameters. The left arm and leg have been partially paralyzed from birth, making it a case of the congenital type of spastic hemiplegia of infancy. There are no

distinct traces of left facial paralysis, although during a fit the eyes and left side of the face are much drawn to that side and severely twitched. The first convulsion occurred when he was nineteen years of age. The apparent exciting cause was excessive bathing in the river, with the accompanying exposure to the hot rays of the sun. The convulsive seizures at first did not come oftener than once a year, but as time went on they increased in frequency as well as severity, until the intervening periods did not exceed a fortnight. Under more favorable conditions the intervals are now widened into exemptions of from three to six months. An attack is ushered in by a distinct aura, commencing at the pit of the stomach. It is a nervous sensation, which rapidly works up toward the throat, producing a sense of suffocation. The first manifestation of the fit shows itself in the paralyzed arm, and soon extends to the defective leg. If the convulsion is slight, it is confined to this side, but when it is severe it spreads until it becomes general. In regard to the paralysis, the patient can move the arm freely at the shoulder. He can extend and flex the forearm, but the power of supination is entirely lost. The forearm is usually held in a state of semi-flexion on the arm, and strongly pronated. The hand is tensely flexed at the wrist, and the fingers are held in what is termed the interosseous position—that is, flexed at the metacarpophalangeal and extended at the phalangeal joints—and the thumb is strongly abducted. When the patient is agitated or nervous from any cause, he suffers from a painful jerking of the whole arm, which frequently extends to the muscles of the neck. At such times he carries the affected arm back of him, with the wrist held firmly against the spinal column in the lumbar region, with the palm of the hand directed backward. The fingers are constantly agitated at all times with choreoid movements.

The following asymmetry between the two sides was noted:

	Right.	Left.
Clavicle, length	7¼	7
Arm, length	12½	12½
Arm, circumference	10¾	9¾
Forearm, length	10¼	9¼
Forearm, circumference	10⅝	8¼
Hand, circumference	8⅝	7¾

The paralysis is much less in the lower extremity than in the upper. He has good control of the thigh and leg. The foot is partially inverted, and he walks on the ball of the foot, with the heel elevated.

The following measurements were carefully made:

	Right.	Left.
Thigh from ant. sup. spine of ilium to ext. condyle	18½	18½
Thigh, circumference, thickest	20	18½
Leg length from head fib. to ext. malleolus.	16½	16
Leg, calf, circumference	12¾	11½
Foot length	9	8¾
Foot, circumference of instep	12	11⅝

The tactile sensibility of both arm and leg is normal. The patellar tendon reflex in both legs is increased.

C. McM——, male, aged twenty-one years, weight 131 pounds, height 5 feet 5 inches. The father was a drunkard. Early history of patient is much obscured by the fact that he is friendless. His mind is too enfeebled to answer intelligently the questions put to him. He says, however, enough to imply, which is confirmed by the symptoms, that the paralysis and fits came on early in life, probably before he was five years old. He has left-sided hemiplegia; there is arrest of growth of the left extremities, and the paralyzed leg has regained much of its tone. A description of the paralyzed parts would be to a large degree but a repetition of the former case, excepting that the foot is much more deformed. All of the measurements plainly indicate the arrest of development of the withered side; even the left clavicle is three-quarters of an inch shorter than the right. The patellar tendon reflex is not markedly increased, and sensation appears to be normal.

Edward Y——, male, aged thirty years, has been under observation for several years. Mother subject to epilepsy in early life. Patient at birth was healthy, and during infancy gave evidence of unusual brightness of intellect. At the age of five years he had a severe attack of measles and whooping-cough combined, which resulted in an alarming seizure of convulsions. From this attack he recovered crippled by hemiplegia of the left side. The paralysis is spastic in character, and has been permanent. The fits have continued with varying intensity to the present time. The patient has never been able to acquire school education, and while possessing sufficient mind to make his wants known, his memory is poor and the action of his mind is slow and sluggish; the expression of countenance is dull and apathetic. The muscles about the shoulder-joint are implicated in the paralysis, and he cannot extend the forearm upon the arm, or supinate the forearm, and considerable resistance is offered to passive supination of it. The hand is similar in condition to that described in the

first case; none of its movements are capable of being performed. It is tightly bound down in its helplessness by spasmodic contractions, and the usual choreiform movements keep the fingers in restless action. The left lower extremity is somewhat feeble, and measures less generally than the corresponding parts on the right side. The patient drags the left foot slightly in walking, although there is but little deformity of the foot. The patellar tendon reflex is slightly increased. The face is symmetrical, and shows no evidence that the facial muscles are implicated. Movements of tongue are free, and articulation distinct. Convulsions begin in left arm, and extend when severe to the whole person; left side of face is drawn and jerked by clonic spasms. He also has petit mal; during these attacks the twitching does not extend beyond the paralyzed arm. Sensation is normal in the affected side.

COUGH IN PHTHISIS.

BY M. E. FITCH, M.D.

There are a number of subjects the management of which becomes in time weariness to the soul of the practicing physician. This is due to the fact that as a rule he knows in advance that he is going to have very little success in handling them. The practitioner is only human, and in these cases he has two sources of discouragement, not only the result as concerns himself, but also the knowledge that the patient is doomed to greater and greater discomfort and depression until death ends the painful scene.

Such are the so-called chronic diseases, such as epilepsy, phthisis, carcinoma, etc. This is particularly true in phthisis, and even more so in the treatment of certain symptoms, such as cough or night sweats. The average lecturer even in the schools feels called upon to apologize for spending time on these subjects, and yet nothing is more wide-spread and urgent than the proper treatment of just such cases. The physician does harm not only to his patient but to himself in neglecting to put long, careful thought on these conditions.

In taking up the management of cough in phthisis we must avoid in the first place the use of routine treatment. To have one or two stock remedies and to order them treated like automatons is reprehensible work. It is essential in the first place to search for the pathology of each case and the peculiarities of the clinical phenomena, and follow their suggestions; we may be only partly successful, still we have the consciousness of knowing that we are doing our best under discouraging circumstances.

Opium in some of its forms is the basis of the routine treatment of cough in phthisis; and undoubtedly in its proper place and form it is most useful and efficient. We must remember that it is apt to destroy the appetite, and interfere with the activity of the liver and intestinal tract. It dries up the secretions of the mouth and throat, increases the tendency to sweats, and renders the patient sluggish and unrefreshed. It often does harm by deadening the sensibility of the respiratory tract, so that the sputa is absorbed into the system and sets up septic fever; while on the kidneys and heart its effect is often unhappy.

Cough is a distressing and often dangerous symptom, robbing the patient of needed rest, causing alarm and actual pain, and sapping strength, not only by actual exertion, but also by producing vomiting. Moreover, it is likely to cause two unfortunate accidents—hemoptysis and pneumothorax. It has been well said that cough in phthisis occurring at different times is due to different causes, and hence a logical way to handle this subject is to divide it, according to these times. The most common time for cough in these cases is at bedtime; in fact, this is the time for coughing in most phthisical patients. Unpleasant, severe, and depressing, it can be the principal factor in a downward course. At once we must find, why does the cough come at this time? It must be due, to some extent at least, to the habit of going to bed; therefore the exertion, the movements, the change of temperature, and especially the change of posture, are causes, and this must be remembered. In the first place the room in which the patient sleeps must be carefully prepared for him; it must be well ventilated and sweet, and in winter made comfortable with a fire, while it must always be a room into which the sun shines for a time during the day. The patient must not go up-stairs quickly to bed; if necessary, he must be carried up. Resting for a time, he must undress or be undressed very slowly and easily; it will not do for him to become tired or out of breath. Success in medicine depends largely on details, and the physician must know that this is done intelligently. Often the patient can attend to it; more frequently some efficient member of the family can be trusted. His bed should be warmed, and he should wear a woolen nightgown to his heels, which also should be warmed before being put on. The patient must not attempt to lie down in bed at all, but, with pillows propped up, he should gently recline. It is well if possible to have some one with him at this time to give him a sense of comfort and companionship. The plan can be tried of attempting to read the patient to sleep with some steady, non-

exciting literature. Of course, the light and quiet should be maintained as in other sick-rooms.

Under these circumstances sedative cough mixtures should not be employed, unless absolutely required. Here is the time for the use of morphine, or some such excellent drug as heroin in some combination. This latter drug is newer than morphine, and frequently works far better. It also has the advantage of not being "morphine," which has a very bad reputation with the general public.

Despite all this care generally the patient will not get through the night without being disturbed with cough. The secretions collect, the nervous centers become irritable; pyrexia adds to the fuel, with consequent restlessness and cough. It must be remembered that a moderate amount of cough is healthful and necessary; it is only the excessive and exhausting cough that we must check. The use of warm food through the night is most excellent; if he has no nurse, and the majority of consumptives have not, he can use a "night light" feeder containing soups or broths. The prevalence of ready-made soups or some preparation like malted milk is useful. Of course, individual idiosyncrasy should be consulted. Occasionally there are patients who prefer cold liquid foods. Frequently a mild stimulant does better in the milk, such as brandy or port. If these measures are not enough, the use of heroin or similar drug can be repeated once or twice during the night.

It is the morning cough that is naturally the most abundant in secretion, and cough is almost always seen at this time of day. Here it is proper to assist expectoration, to stimulate the system, and to avoid most strictly the use of any narcotic drug. The patient should have retired early, and he should have early breakfast; by early I mean about half-past six or seven o'clock. Cocoa, tea, a nicely cooked egg, or milk punch is indicated, the form depending on the patient's taste. The use of these warm demulcent fluids helps to unlock the secretions and complete the expectoration; as a result the patient frequently feels stronger and more comfortable, and may fall to sleep again for a short time.

The cough of the evening is generally the cough of exhaustion; the patient is apt to be in a close room, filled with the products of respiration and the consumption of gas or oil, trying to brace up for the benefit of relatives, or because he feels depressed himself. As a result he is exhausted; his pulse and face show this fact; all of which is doubly unfortunate. The patient is ready to begin the night, tired, nervous, and exhausted. In fact, the consumptive is apt to turn the night into day, going to bed

late and getting up late. In this way he begins the night with cough, fever, and exhaustion. *There should be no evening cough;* keep the patient from unhealthful air and surroundings, and put him early to bed.

Probably the severest form of cough in phthisis is that following meals, for it is not only severe in itself, but deprives the patient of much needed nourishment. As a rule these cases are well developed. They are apt to be cases of cavities, surrounded by tense consolidation. The resultant effect upon the stomach and larynx is one of increased irritability. The pharynx, already sensitive from the coughing, is sensitive to the passage of food and starts reflex vomiting as a result. The same is true of the stomach. The use of sedatives to allay the spasm of coughing and vomiting may increase the indigestion, constipate the bowels, and thus decrease an already poor appetite. Absolute rest after eating at times is excellent; if necessary have the meals served to the patient as he reclines on a lounge; or even rest in bed at times is sufficient. This measure should always be tried, while the food should be made as nutritious as possible. Prepare the patient by previous rest and the giving of some stomachic bitter with diluted nitromuriatic acid, or some preparation such as peptenzyme to help digestion. Often it will be found that old-fashioned counter-irritation over the chest wall or over the epigastrium will benefit. Remember the possibility of establishing a vicious circle in these cases where the cough and the sickness in turn increase each other.

There are a variety of expedients which are of service from time to time in selected cases; various applications are useful in certain coughs, such as menthol inhalations consisting of a few drops of a fifteen-per-cent solution of menthol dropped in an ordinary inhaler, or a spray of alum applied with a hand-ball apparatus. Pounded ice is a household remedy; swallowed and not sucked it may be good, but it is apt to produce indigestion. Thymoline is one of the newer drugs that can be used; glycothymoline in a nasal douche may be of service in selected cases. In stubborn cases the inhalation of a little chloroform or menthol may be a relief.

Blistering over the course of the pneumogastric nerve has been recommended by Granville; this is done along the anterior margin of the sternocleidomastoid muscle with glacial acetic acid every two weeks alternately. This has been recommended in any persistent cough, and may be tried. The writer has had no good results from it.

Remembering that no cough is to be treated in a routine way,

still there are a number of valuable and tried prescriptions which may be worked in as the emergency seems to demand.

The French have a cough mixture which is rather elegant, although containing nothing new:

℞ Morphinæ sulphatis ..... gr. ij.
Calcis hypophosphitis ..... ʒj.
Aquæ amygdalæ amaræ..... ʒj.
Sacchari ..... gr. xl.
Aquæ ..... ʒxxiij.

Dissolve the hypophosphite in the water with the aid of heat, then add the sugar, and when the solution is cold add aromatic water and morphine. Teaspoonful is the dose.

Where the stomach is sensitive and the cough is obstinate, a bad combination, the following is excellent:

℞ Chloralis ..... ʒj.
Alcoholis ..... ʒiij.
Picis liquidæ ..... gr. ix.
Liquoris sodæ ..... min. xxiv.
Aquæ ..... ʒij.
Syrupi ..... ℥xij.

Dissolve the chloral in the alcohol and the tar in the water with the aid of the soda solution. Mix the two solutions with the syrup, allow it to stand for five hours, and filter. One or two teaspoonfuls is the dose.

When the cough exhibits a mucopurulent expectoration, and the stomach will stand it, the following can be used:

℞ Potassii iodidi ..... ʒj.
Acidi nitrici diluti..... ʒiij.
Tincturæ belladonnæ,
Acidi salicylici.... .....āā ʒj.
Aquæ camphoræ ..... ℥iij.

Sig.: A tablespoonful in water three times a day.

This prescription is a favorite one in the Bellevue Hospital, New York.

Bosworth recommends for constantly irritable cough this mixture:

℞ Acidi hydrocyanici diluti,
Chloroformi ..... āā fʒss.
Tincturæ hyoscyami,
Tincturæ tolutani,
Aquæ camphoræ,
Mucilaginus acaciæ ..... āā f ℥j.

Sig.: A teaspoonful three or four times daily.

Fothergill recommended another prescription for irritable cough that has survived many years:

℞ Acidi hydrobromici diluti..... 3ss.
Spiritus chloroformi ..... min. xx.
Syrupi scillæ ..... 3j.
Aquæ q. s. ad..... 3j.

Sig.: One dose to be taken twice or thrice daily.

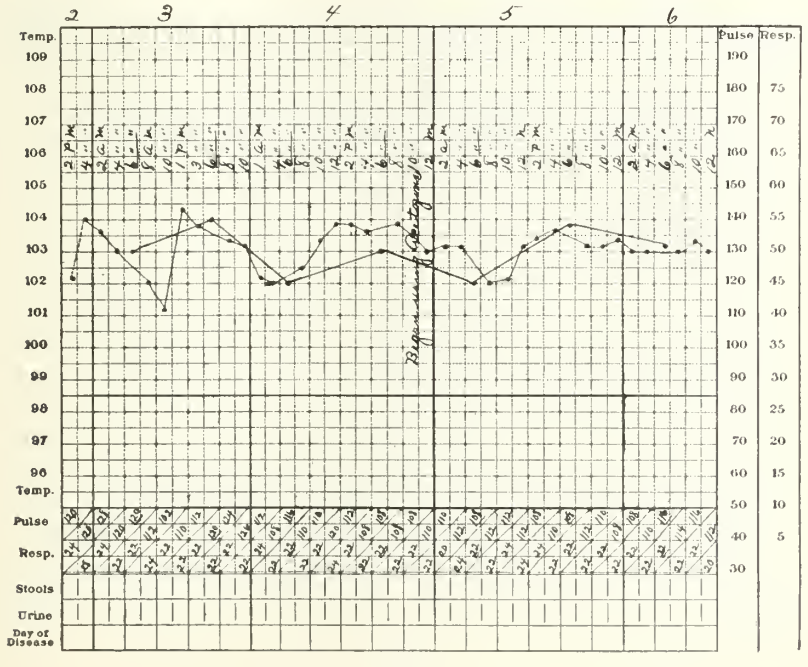
In closing let me repeat, do not treat a case of phthisical cough in a routine way; approach the case with the deepest anxiety and the utmost resourcefulness, remembering that in our hands lies the power to fight more or less successfully this unpleasant symptom.

FOUR CASES OF TYPHOID FEVER IN WHICH ACETOZONE TREATMENT WAS EMPLOYED WITH SATISFACTORY RESULTS.

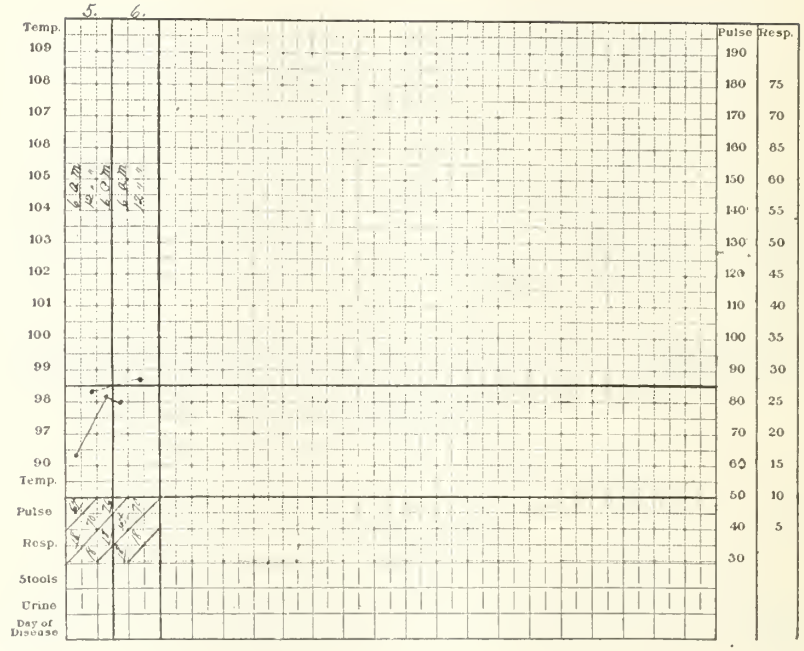
BY CHARLES EMIL BRACK, M.D.,

Associate Professor of Obstetrics, College of Physicians and Surgeons, Baltimore, Md.

Case 1.—Miss J——, a trained nurse, had been in charge of typhoid cases in a Pennsylvania hospital during an epidemic, and had come to Baltimore to take up postgraduate work. She had been ailing for three or four days previous to admission, com-



CASE 1.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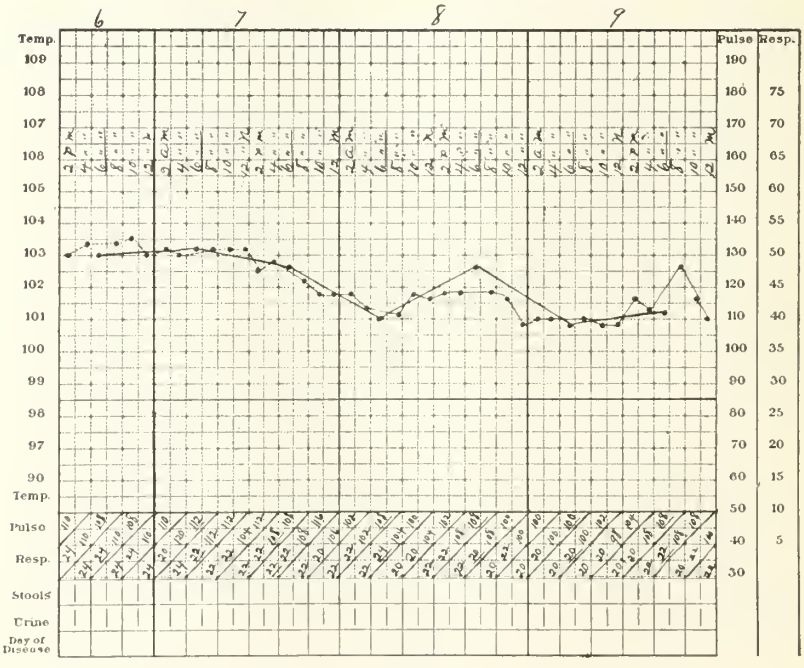
Urine
Day of Disease

CASE I.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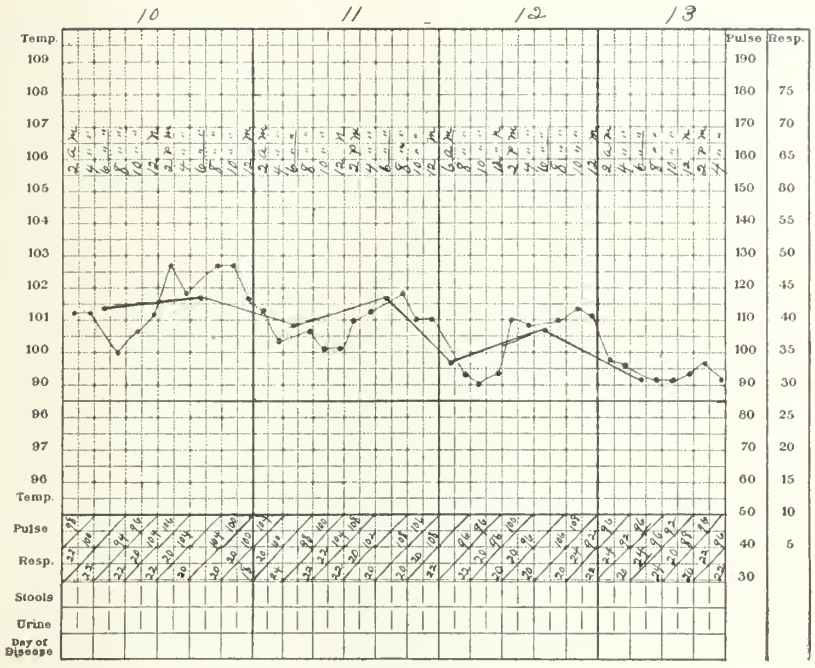
Day of Disease

CASE 1.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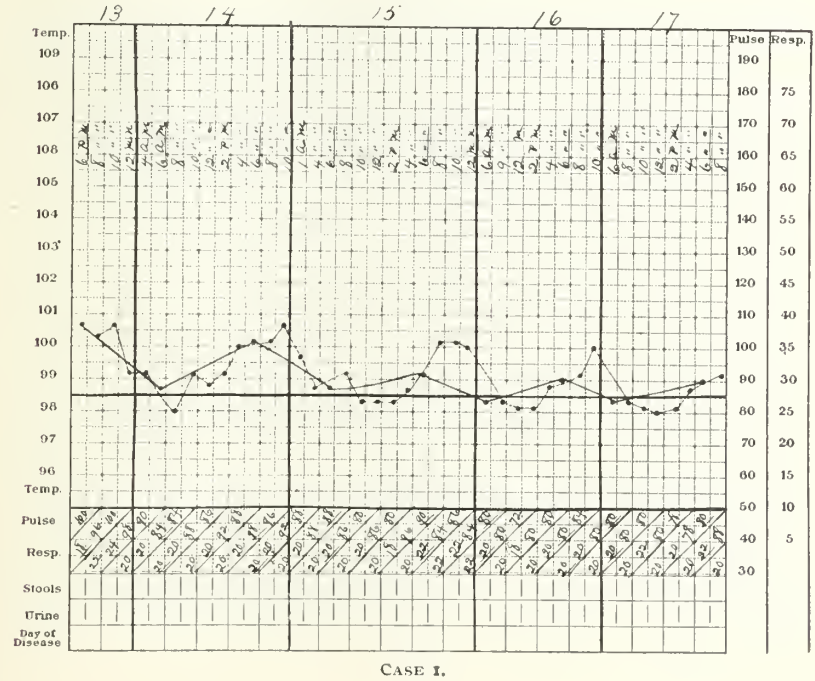
Day of Disease

CASE I.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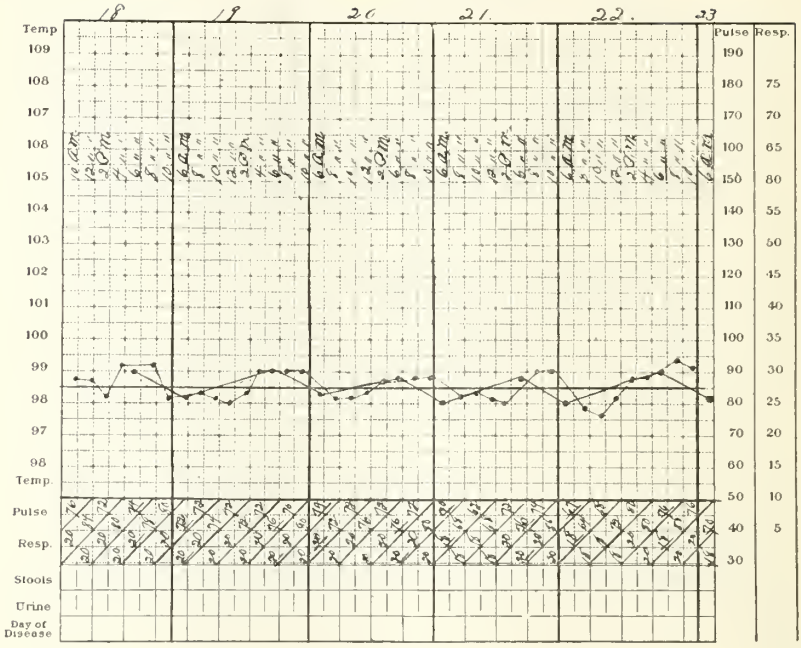
Day of Disease

CASE I.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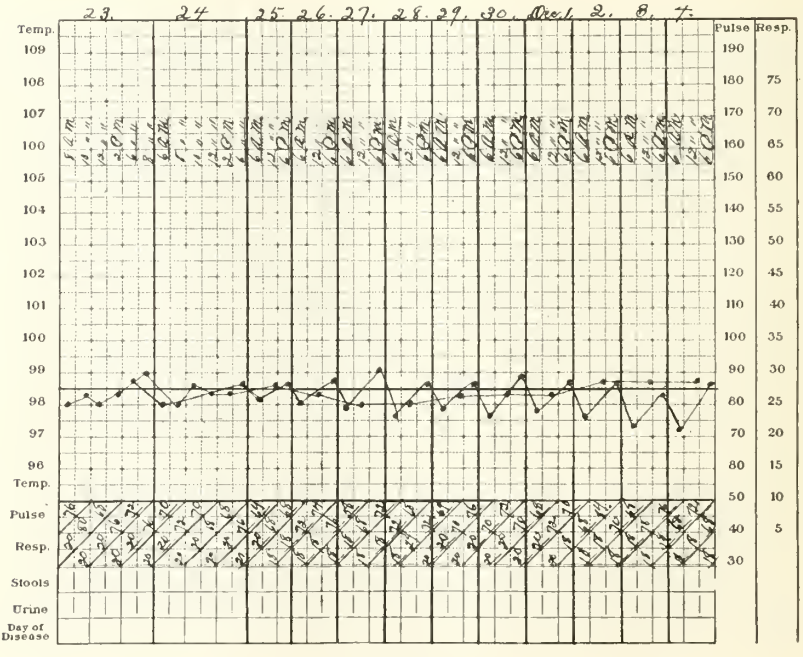
CASE I.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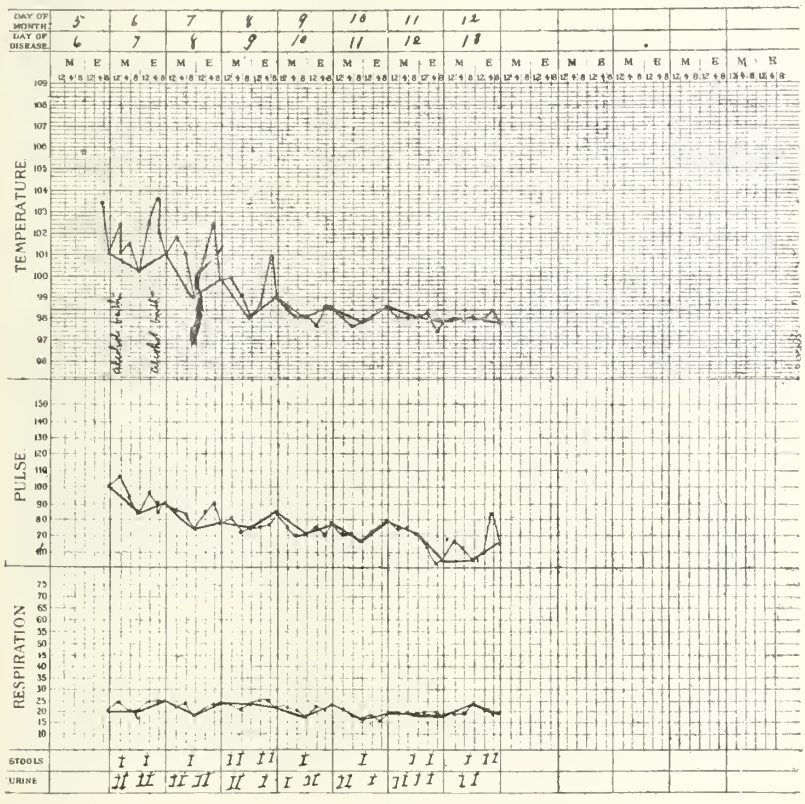
Day of Disease

CASE I.

plaining chiefly of violent and persistent headache, languor, anorexia, and constipation. An examination of the blood by the Widal method, and of the urine (diazo-reaction), yielded positive results. No rose spots could be seen upon the abdomen. The tongue was coated, and there was some abdominal tenderness in the right iliac region.

Calomel, quinine, and coal-tar preparations failed to relieve the symptoms or influence the rising temperature. On the third day the patient was placed upon acetozone, 30 grains of which were administered each twenty-four hours; the effect was, the headache disappeared, the tongue cleared, and three days later she felt very comfortable. In addition to the acetozone, one teaspoonful of Epsom salt was given every other day. The nourishment consisted of beef tea, and later milk and junket. During the first four days there was some diminution in the quantity of urine, but this symptom soon disappeared.

Case 2.—Mrs. F——, twenty-five years of age, the mother of

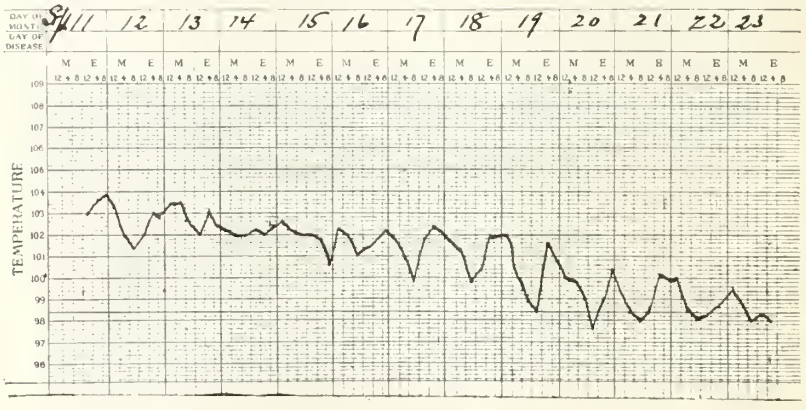


CASE 2.

one child, for one week previous to November 5, 1902, had a steadily rising temperature that failed to respond to quinine and coal-tar antipyretics. No rose spots could be observed; there was no abdominal tenderness, but a slight tendency to diarrhea was noted, with intense and persistent headache. The tongue was coated and showed no disposition to clean off after calomel medication. The diazo-reaction and the blood tests for malaria and typhoid were negative, though in a second examination of the blood, November 5, the Widal reaction was obtained.

The administration of 30 grains of acetozone, each twenty-four hours, was met with a prompt response. The temperature and pulse-rate subsided on the fourth day of treatment. Two alcohol sponge-baths were given, and ice-bags were applied to the wrists and head for three days. Within twenty-four hours the headache disappeared; the tongue cleared off in forty-eight hours, and the patient became comfortable. The only additional medication consisted of the use of a teaspoonful of magnesium sulphate every other day. The diet consisted of liquid beef peptonoids, beef tea, and junket.

Case 3.—Mrs. H——, twenty-three years of age, the mother of one child, gave the following history: Though previously in good health she has been ill for a month, during which time she had been confined to bed and treated for malaria. She improved



CASE 3.

sufficiently to be able to go about. She then removed to the northeastern section of the city, and a week later began to have chills that occurred irregularly, severe headaches, and pains in the lower extremities. She thought these symptoms denoted a recrudescence of the malaria.

An examination revealed a temperature of 102°, and a pulse-rate of 100. The patient was seen to be anemic; her bowels were constipated; no rose spots were observed, but there was some tenderness on pressure in the right iliac region. A blood examination for malaria gave a negative result. Magnesium sulphate was prescribed, with salipyrin, five grains, every two hours.

When seen two days later the patient was feeling much worse: her temperature had risen to 104°, the pulse-rate to 110 beats a minute, the headache was severe, and she was much nauseated. The blood test for typhoid (Widal) yielded a positive result. At this juncture acetozone treatment was begun, 30 grains being given each twenty-four hours, and the remedy being retained despite the persistent nausea. At once the temperature and pulse-rate began to decline, the headache disappeared, the tongue, which had been badly coated, became clean, and after forty-eight hours the patient stated that she felt well and was quite comfortable.

The additional treatment consisted of one or two alcohol sponge-baths, the application of ice to both wrists, and the administration of one teaspoonful of magnesium sulphate every other day. The diet was restricted to milk, junket, and tonic beef. The temperature remained normal after the thirteenth day, and the patient made an uninterrupted recovery.

Case 4.—I append the history of another case, of which I have no temperature record, but which presents some interesting features. A little girl of four years, frail and delicate, had infantile spinal paralysis when a year old, with resulting deformity of one foot. The child, who had frequent attacks of indigestion, had been ill for two weeks and under the care of a physician, who had made a diagnosis of malaria, and had prescribed calomel and quinine. During that period there had been a persistent though irregular elevation of temperature, which apparently subsided, but recurred three days later. At this point I saw the child. The axillary temperature registered 102°; the pulse-rate was 130; the abdomen was tense, tender, and tympanitic, and there was marked gurgling in the right iliac region. The bowels were constipated, and the quantity of urine was notably diminished. A blood examination yielded a positive reaction of typhoid fever. An enema of glycerin and water was administered, and acetozone, eight grains in twenty-four hours, was prescribed, with a restricted diet of milk and beef tea. Under this treatment the temperature promptly subsided, the abdominal tension and tenderness disappeared, the output of urine increased to the normal average, and on the fifth day of treatment the child appeared well.

On the sixth day the patient became languid, the axillary temperature rose rapidly to 102.5°, the eyes became inflamed, a cough developed, and on the second day following the advent of these symptoms an eruption appeared. *The child had developed measles.* It may interest the reader to know that the acetozone treatment was continued until convalescence was fully established. I wish to add that there was not the least doubt concerning either the Widal reaction in this case, or the rapid response to the acetozone treatment after other medication had failed.

Sir Charles Nicholson, Bart., of London, celebrated, according to the *New York Medical Journal,* the ninety-fifth anniversary of his birth on November 23. He took his M.D. degree in Edinburgh in 1833, and in the following year went to Australia and engaged in practice in Sydney, where he was the leading citizen for nearly thirty years. He was a member of the first Legislative Council of New South Wales, in 1844, and three times speaker of that body. He was the first Chancellor of the University of Sydney, and held that office from 1854 to 1860. He contributed a collection of Egyptian antiquities to the Sydney Museum, a catalogue of which covers some 150 pages.

Robert Fletcher, editor-in-chief of the *Index Medicus,* makes the following announcement: "The *Index Medicus* was established in 1879, under the editorship of Drs. John S. Billings and Robert Fletcher, and was discontinued in 1899. The present publication, which is undertaken by the Carnegie Institution, will be known as *Index Medicus,* Second Series, Volume 1, commencing in January, 1903. It consists of the titles in full of books, pamphlets, theses, contributions to coöperative works, and original articles in journals, transactions of medical and scientific societies, arranged under subject headings. It is issued as early as possible after the first day of the month, and it represents the literature of the preceding month. A table of contents accompanies each number, and on the completion of the volume an 'Annual Index of Authors and Subjects' is issued. The subject part of this annual index is elaborately subdivided, the classification closely resembling that of the Index Catalogue of the Library of the Surgeon-General's Office. The titles in certain languages, as Russian, Polish, Swedish, Danish, Finnish, Hungarian, Bohemian, Roumanian, and Japanese, are translated into English. The *Index Medicus* publishes no advertisements, and does not exchange copies with other journals."

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

IS MAN A FEEBLE ANIMAL?

That man, apart from his special intelligence, is one of the weakest of all animals for aggression is no doubt correct, he being about the only "beast" of his size who has been left by nature wholly unarmed. He has neither claw nor horn nor jaw capable of rending, or hoof or paw that of itself or untrained can strike a deadly blow; the natural man being, with few exceptions, entirely unaware of the power latent in his own fist, and striking always with the hand unclosed. But for defense, man in his savage state is probably as well provided as any except the most formidable beasts of prey. He certainly could not contend with tiger, lion, panther, or elephant, but he could run away, and as he is among the swiftest of animals, would probably escape.

He is, however, possessed of a faculty, given to no other animal of equal speed, of climbing a tree. In a state of civilization this dexterity is largely lost, but in the savage state it remains almost unimpaired. An American schoolboy can climb in a way, as he can ascend a ladder, but a savage will go straight up a smooth pole, using his feet as if they were a second pair of hands, and crossing from tree to tree with marvelous facility. The civilized man cannot do it because he has lost much of the use of his feet, partly from shoes, but more from reliance on his hands and intelligence for everything. Not only that, but he has likewise lost the power of looking down with unconcern from a height, a power belonging to all savages, and capable of being reëstablished by training, as in the case of bridge carpenters and chimney workers. A wild beast would not have an easy prey of an "animal" who could run a short distance as fast as an ordinary horse, climb like a monkey, and swim as no other land animal can.

The want of clothes or of suitable food does not necessarily alter the case. A large section of humanity does not wear clothes in any way conducive to health, comfort, or protection. The waist-cloth of the Indian is worn from motives of decency, not of hygiene; and naked peoples do not suffer in health from that cause. Two races at least—the native Tasmanians and the Fuegians—face severe cold without clothes, and it must not be forgotten that in tropical climates cold seems to strike as severely as in the temperate zones. The fall in temperature is comparatively as great, and the suffering often as acute. The question of suitable food is more puzzling, but it is not quite insuperable. Half the difficulty would disappear if man had no disgusts, which as an animal he would not have. If we suppose him remaining in mild climates, he would have fish, the flesh of birds and small animals, berries, fruit, and some leaves; and may be credited with the instinct to lay in stock against inclement weather.

One of the most curious of the distinctions between man and other mammals is the longer period of childhood in the former. He is not the longest-lived of them, though requiring much the longest time to grow. The effect of that sort of weakness would be this—conceiving the human being without intellect—that the whole work of the female in a natural state would be the care of her young. This necessity is certainly not imposed on any other animal, and it is accompanied by the peculiarity that in man almost alone—not quite alone—is the female decidedly the inferior of the male in strength and brute courage. It would almost seem as if this weakness had been met at a cost of a certain diminution of the defensive power, the female being comparatively useless in combat, which is true also of the stag. The corresponding weakness at the other extreme of life is not peculiar to man, and would make little difference in a struggle for existence, being equivalent at the worst to a universal deduction from natural longevity.

EDITORIAL NOTES.

Lord Lister's Jubilee.

The profession of this country as well as that abroad will be interested in the December 9 issue of the *British Medical Journal,* which is entitled the "Lister Jubilee Number." On the first page, in place of the usual title of the journal, is a half-tone reproduction of the Lister Prize: Policlinico Umberto, Rome. Von Berg-

mann, the great German surgeon, contributes an article on "Plugging with Iodoform Gauze in Operations Performed in Cavities of the Body." This is followed by "An Essay on Scientific Surgery: The Antiseptic Method of Lister in the Present and Future," by Dr. Lucas Championnière, of Paris. Next comes an article by the Italian surgeon, Francisco Durante, entitled "Observations on Certain Cerebral Localizations." Following this is a clinical lecture, "Antiseptic Treatment of Wounds," by Prof. Oscar Bloch, Copenhagen. A contribution by Prof. Von Mikulic-Radicki, entitled "The Treatment of Fractured Patella," is next in order. Howard Marsh's contribution is on "Infective Arthritis." "The Influence of Lister on Military Surgery" is set forth by Alex. Ogston, of Aberdeen. D. Berry Hart's tribute to the Father of Modern Surgery is an essay on Pasteur and Lister. A number of photographs of Lister at different periods of his life are included in the next article, "Lord Lister and Antiseptic Surgery." On the whole it is a graceful tribute from men of many nationalities to one whose work will always be looked upon as the greatest contribution to surgery the world has ever known.

The Treatment of Diphtheria by the Intravenous Administration of Antidiphtheritic Serum.

The splendid results of the injection of antidiphtheritic serum have secured for it a permanent place in the therapeutic armamentarium of the physician. Cases, however, are sometimes unfortunately seen so late that its use has little or no effect whatever. Dr. L. Cairin, in a recent number of the *Lancet,* advocates in these cases the intravenous administration of the serum instead of the usual subcutaneous methods. The number of cases reported by Dr. Cairin is small, but the results were brilliant. He advocates its use in malignant forms of the disease—*i.e.,* those characterized by hemorrhage from the nose or into the skin, by great glandular enlargement with manifold cellular infiltration and extreme blanching of the skin; cases in which there is any marked involvement of the lungs, a moribund or profoundly toxemic condition of the patient. In all such cases Cairin recommends an initial dose of from 20,000 to 25,000 units; this to be repeated in twenty-four hours if considered necessary. It would seem that this method of treatment is worthy of a careful trial in seemingly hopeless cases of diphtheria, for although the doses advocated are large they would be harmless if given with due antiseptic precautions.

ITEMS AND NOTES.

CHOLERA still continues in Manila.

MONTANA has a State board of osteopaths.

OUT of the 3600 physicians now practicing in Paris 57 are women.

DURING the year 1902 Massachusetts had 2263 cases of smallpox.

A CRUSADE with oil to kill mosquitoes is begun in a part of Honolulu.

THE International Congress for the Prevention of Industrial Diseases is to be held in Milan in 1904.

BUBONIC PLAGUE is said to have appeared at La Paz, Guaymas, Mulje, and Mazatlan, all on the Pacific coast of Mexico.

CONNECTICUT authorities report that State to be now entirely free from foot-and-mouth disease.

THE London Hospital for sick children has received $250,000 from Mr. William Waldorf Astor to build a new out-patient department.

BY order of the government of Austria, every drug store in that empire must keep diphtheria antitoxin on hand and sell it below cost.

THE King of Denmark has created Lord Lister, on the occasion of his jubilee, a Knight of the Grand Cross of the Order of Dannebrog.

SWEDEN'S last census records the lowest death-rate yet attained by a civilized nation. During the last ten years it has only averaged 16.49 per 1000.

GUATEMALA, with a mortality of 41 in 1000, is said to be the least healthful country in the world; while New Zealand has the lowest death-rate, 11 in 1000.

RICHARD, FREIHERR VON KRAFFT-EBING, the well known specialist on mental and nervous diseases, died at Gratz, Styria, Austria, December 22, aged sixty-two years.

THE House of Representatives passed the pure food bill December 19. This bill prohibits interstate commerce in any article of food or drug that is adulterated or misbranded.

THE American Association for the Advancement of Science petitioned the president, January 2, that one member of the Isthmian Canal Commission should be a physician.

THE Lower House of Cuban Congress has offered $400,000 to aid the city governments in the islands to continue the high sanitary standard achieved under American occupation.

THE University of Freiburg has conferred the honorary degree of M.D. upon Gustav Fischer, of Jena, who as a medical publisher has brought out a large number of important medical books.

PROFESSOR NOTHNAGEL, who holds the chair of clinical medicine and therapeutics in the University of Vienna, has been nominated a life member of the Upper House of the Austrian Parliament.

THE most inexpensive prophylactic treatment is known as the treatment sold by the friars in the Philippines, consisting of a cross and a prayer. It is guaranteed to prevent cholera, and sells for 2½ cents in Mexican money, or a trifle over a cent "gold."

MME. ROSALION-SOCHALSKAIA, who died recently at Poltawa, Russia, began the study of medicine at the age of fifty-four, at the same time that her daughter entered medical college. She had done much literary work before, and continued it while practicing medicine.

THE United States Civil Service Commission announces that the commissioner of pensions would like to provide for the appointment of twenty-five young students of medicine as clerks or copyists in the pension office. Only graduates of recognized medical schools will be allowed to take the examination.

THE Chinese port of Amoy has the unenviable reputation of being the most unhealthy place in the world. Built some ten centuries ago over a cemetery in which, according to a modest calculation, 5,000,000 bodies were interred, its drinking-water is derived from wells. Plague and typhus are epidemic, and the mortality reaches frightful proportions.

ACCORDING to statistics recently published by the Imperial Health Office in Berlin, the death-rate per million of population in the various countries is as follows: Russia has more than 4000 deaths; Austria-Hungary and France more than 3000; Sweden, Germany, Switzerland, and Ireland more than 2000; Netherlands, Italy, Belgium, Norway, Scotland, and England more than 1000.

A HEARING on dentistry was given at Washington on December 13 by the House Committee on Naval Affairs, and many leading dentists were present to urge that a bill be passed raising the grade of naval dentists. At present they are rated as yeomen, but the National Dental Association wants a "dental corps" created, so that the dentists may have proper rank and pay.—*Medical Review.*

THE *San Francisco Call* states that Dr. A. H. Glennon, the accredited representative of the United States government, is preparing a report to Surgeon-General Wyman of the Marine Hospital Service at Washington, to the effect that there has never been bubonic plague in California. Dr. Glennon will go further, and declare positively that after a thorough and extensive investigation the bacillus supposed to be that of the plague is that of chicken cholera.

AN army doctor has noticed that when a wounded soldier was taken within easy hearing of music, hemorrhage was either greatly reduced or actually stopped. Neither he nor others who confirmed his observations could understand how this phenomenon was brought about, but it is now believed that the vibrations of the air produced by the music cause the patient to become faint, in which case the action of the heart is so considerably lessened that the overflow of blood is reduced.—*Exchange.*

DR. BON CHANG has applied to the New York State Board of Medical Examiners for a license to practice his profession in New York. Dr. Chang is a practitioner of repute after the methods of the Middle Kingdom, and is thoroughly conversant with the properties and uses of the simples of the Oriental materia medica, but it is feared that he may be a little weak when it comes to questions of pathological histology and bacteriology. If he gains the coveted license, he will receive the appointment of physician and surgeon-in-chief to a new hospital which the merchants of Chinatown contemplate establishing in Park Street,

near Mott Street. The hospital will be supported in the Chinese fashion, recently adopted, it is said, by the Stillman Infirmary at Harvard, the members of the colony paying regularly while in health, but enjoying free treatment when ill.—*Medical Review.*

The *Journal of Tropical Medicine* announces the offer of three prizes of the value of $50 each for essays on the following subjects: Sivenright prize for the best article on "The Nature and Treatment of Diseases, Exclusive of Acute Dysentery, Affecting the Lower Part of the Large Intestine, Occurring in Warm Climates;" Belilios prize for the best article on "The System of Drainage and Sewerage (domestic and municipal) Best Suited for Tropical Climates;" Lady MacGregor prize for the best article on "Critical Examination of the Practical Value of Antityphoid Inoculation." Intending competitors must send name and address, and the title of the prize to be competed for, to the *Journal of Tropical Medicine,* 83 Great Titchfield Street, London, W., before February 1, 1903, and the names of the winners will be announced in July of the same year. The competition is open to all qualified medical practitioners of any nationality, and essays may be written in English, French, German, Italian, or Spanish.

The difficulty of obtaining young men graduates of medical colleges who are able to pass the examination for appointment as assistant surgeons in the army must, sooner or later, engage the attention of the authorities. Surgeon-General O'Reilly has a plan in contemplation which he hopes to see realized before he finishes his term of office. It is his idea to take graduates and, after examining them as to their general qualifications, admit them to the Army Medical School in Washington, and give them a training in special branches for a year or more, subjecting them to examinations as they progress, and at the end of the term select from among them those who are deemed competent to fill the vacancies in the medical corps. Such as do not find a place in the regular establishment would be of use in the national guard organizations, which latter will be benefited by having available young men who are specially trained in military medicine and surgery, hygiene and sanitation. In this way the State troops would have at their bidding surgeons who have a practical knowledge of their military as well as professional duties. Surgeon-General O'Reilly is also in favor of requiring that the young men who enter the medical department after this preliminary education shall be required to serve at least five years.—*Army and Navy Register.*

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Appendicitis.

Four classifications of pus, according to B. Merrill Ricketts (*American Journal of Surgery and Gynecology,* December, 1902), may be given, depending upon the location: (1) Intra-appendicular; (2) peri-appendicular; (3) general peritoneal; (4) retrocæcal.

These are given in order of their supposed frequency. Drainage in the first is not to be considered, removal of the appendix and closure of the belly wall being all that is necessary.

The second is more complicated and diversified in character. It is highly probable that the cases of this class requiring drainage are limited to those in which there is a perforation of the gut or the appendix itself, or both, especially the former, and the latter, too, if not removed when perforated. There are a certain number of cases of rupture of the appendix in which closure without drainage would be appropriate. This is possibly true of direct perforation into the intestinal cavity as well.

The third class (general) may be the result of any of the other three types with or without perforation; usually perforation of the appendix or gut, or both, is present.

It is this class of cases which frequently terminates fatally. Seventy per cent of the author's deaths are in this class of cases. While the inflammatory process may be general, the pus may be either localized or general.

The fourth class includes all retroperitoneal abscesses, and is less frequent than any of the three preceding types.

There may or may not be perforation of the cæcum or appendix, or both.

Rupture of abscess may be into the gut, the general peritoneal cavity, the pleural cavity, the lung, or all; or it may be rupture externally at almost any part of the body, from the shoulder to the knee, or into the vagina or rectum.

This is the most difficult to drain. Pus is usually very offensive, and must be subject to constant drainage. Fully thirty per cent of the writer's deaths in appendicectomies have, in this class, no doubt been due to imperfect drainage.

A more perfect system of drainage in this class is desired. The so-called flank drainage appears ideal, but as yet no perfect method has been inaugurated—one that will give perfect and lasting drainage, things which are absolutely necessary for a successful termination of such cases.

Drainage-tubes, gauze, and the various substances for drainage should be discontinued in a great majority of pus cases, if not in all. They are foreign bodies, and are known to be more or less objectionable.

Phagocytosis is the probable ground on which to base any hope for the discontinuance of the use of tubes, gauze, and the various substances so frequently used. If this theory is correct (and the evidence is rapidly accumulating to substantiate its being so), the fact should become more generally known, and the method of its application better understood. Pus in all cases should not be subjected to phagocytes, neither should pus in all cases be removed by drainage.

If opening the abdominal cavity, together with removal of fluid and immediate closure of that abdominal cavity, in tubercular peritonitis is all that is necessary to cure it, why shouldn't the peritoneum (being nothing more or less than a lymphatic gland) be able to absorb and destroy bacteria, as suggested by Metchnikoff? Certain it is that to phagocytosis must we look for a more rational method of dealing with certain types of pus within the peritoneal cavity.

Case of Foreign Body in the Intestine.

At a recent meeting of the New York Academy of Medicine, L. Emmet Holt (reported in *Medical Record,* Jan. 3, 1903) described this case:

The patient was a child of six months, the son of a physician. He was in the habit of swallowing foreign bodies. Early in June he had an attack of measles, and after the temperature had fallen as usual, it rose again, and he developed an acute mastoiditis. The ears were punctured, but the temperature remained between normal and 106° F. for several weeks. The child recovered without a diagnosis having been made. The temperature would remain normal until noon or 3 P.M., and then would rise rapidly almost to 106°. The father made innumerable blood examinations, but malaria was excluded. The lungs were absolutely normal throughout the attack. In the third week of the attack

the child was found one morning cyanosed and struggling. It had been playing with a paper of safety-pins a few minutes before. The trained nurse entered the room at this time and removed a handful of pins from the mouth, but it was certain at the time that at least one pin had been swallowed. This was on July 5, and on July 10 the mother reported that three safety-pins had been discharged from the rectum, including one which was bent like a fish-hook. The child then had a large constipated movement, and although the trained nurse insisted that it was free from pins, the mother examined the stool very carefully, and was rewarded for her trouble by finding four more safety-pins.

Dr. Holt also referred to the case of the child who had been playing with a set of toys, and as a result had swallowed a sugar-tongs, about one and a half inches long, and a knife, which was a little longer. This emphasizes the necessity for great care in selecting for little children toys having parts which cannot be loosened and swallowed. The speaker said that he had made an autopsy on a child some years ago, and had found a safety-pin impacted in the larnyx. It had apparently caused death.

Surgical Hints.

The following surgical hints are from the January issue of the *International Journal of Surgery:*

In feeding a patient by the rectum it is a good plan to press rather firmly upon the anus for some time, say a quarter of an hour or more, after the injection has been given. This diminishes iritability and naturally favors retention.

In the treatment of Colles's fracture the question is not so much what form of splint or dressing should be employed as whether perfect reduction has been attained. Use anesthesia and the *x*-rays rather than leave the slightest doubt in regard to this matter.

It is a good general rule never to give whiskey or other stimulants to a person who is bleeding, because it is apt to increase the hemorrhage and to augment the patient's excitement. Keep your stimulants away till after the bleeding has stopped, and they are often unnecessary by that time.

In some cases of inoperable cancer of the cervix severe pain sometimes occurs as a result of occlusion of the cervical canal. When this is the case it should be cleared out. Anesthesia is

usually not necessary, but measures must be taken against the bleeding, which may be quite sharp and prolonged.

It must be accepted as a fact that in cancer the younger the patient the more active and rapidly fatal the disease will be. Hence, while the patient's youth may lead to disbelief in the presence of cancer, careful observation is necessary in suspicious cases, for unless prompt interference takes place early in the disease, results are very rapidly disastrous.

It is well known that in at least one-half of the fatal cases of burns shock is the direct cause of death. Hence the treatment must not only be local for the traumatism, but must also be directed to allaying and preventing shock. Pain is a very important element in the production of this condition, and the more thoroughly it can be relieved, the less will be the danger from shock.

Rupture of the Gall-bladder.

Dr. M. Arx (*Correspondenz-Blatt für schweizer Aerzte,* October, 1902) draws the following conclusions:

1. Rupture of the gall-bladder and its ducts into the free peritoneal cavity as a result of ulceration by gall-stones without external traumatism does occur, but it is extremely rare.

2. The presence of bile in the peritoneal cavity, no matter what may be its duration, in itself never produces a suppurative peritonitis; the death, however, which almost always follows is produced by the absorption of the bile into the blood.

3. As soon as a diagnosis of perforation or rupture of the gall-bladder is made out a right-sided laparotomy should be done, as it is only by such means that life can be saved.

4. Puncture of the abdomen for the purpose of evacuating the bile, as has been done and advised by some, should never be performed, since laparotomy is a safer and better procedure.

5. Cholecystotomy with suture of the perforation, or cholecystenterostomy either with the small intestine or the colon, in extensive ruptures with much destruction of the walls of the gall-bladder, is a surgical procedure that may be safely practiced in such injuries.

6. The abdominal cavity before closure should always be thoroughly irrigated with a warm normal salt solution at a temperature of 55° C. The peritoneum will stand this degree of heat without harm.

Typhoid Fever with Trichiniasis and Eosinophilia.

Thomas McCrae (*American Journal of the Medical Sciences,* July, 1902) relates a case in which the association of typhoid fever with trichiniasis was placed beyond reasonable doubt. There is only one other case, reported by Fischer in 1898, in which this can be said to be the case. In that instance the diagnosis was established by a necropsy. The present case was in the Johns Hopkins Hospital, in Osler's clinic, and was frequently seen by that physician. The patient was a German, aged twenty-three, who had been in the habit of eating raw sausage every week, and raw ham occasionally. All the cardinal symptoms of enteric were present except diarrhea, which although present at first was not typical. Temperature on admission, 103.2° F. It was an examination of the blood that first suggested the possibility of trichiniasis. A differential count showed leucocytes 11,000 and 65 per cent of eosinophiles. In view of the now established almost invariable occurrence of eosinophilia in trichiniasis, a piece of muscle was removed from the gastrocnemius with negative results. The patient passed through a moderate attack of enteric, and the temperature gradually came down and reached normal on the twenty-third day. In two days' time he was, however, attacked by symptoms of acute pneumonia on the right side. From this he recovered in the course of a few days. During the whole illness, however, eosinophilia was present, the eosinophilic corpuscles varying from 4.5 to 43.8 per cent. Later in the case a piece of muscle taken from the biceps showed undoubted trichinæ spirales.

A noteworthy feature in this case was the presence in the early blood specimens of cells seemingly intermediate in character between neutrophiles and eosinophiles. The same thing has been noted by Brown in some of the cases he has recorded of trichiniasis with eosinophilia. Later in the case these intermediate cells disappeared, and the eosinophiles were all normal in character. The author discusses the probable significance of this fact. Does it indicate the derivation of eosinophilic from neutrophilic cells? In the muscle itself, affected by trichiniasis in early stages, many cells have been found which suggested transition stages between neutrophiles and eosinophiles. The case here recorded, however, and one by Atkinson, are the only ones where these atypical cells were found in the circulating blood. In the present case, during

the attack of pneumonia, the neutrophilic cells were largely increased in number. This is usual, and McCrae is inclined to regard chemiotactic action as the best explanation both of the increased neutrophilic and eosinophilic cells.

The author, in concluding, lays stress on the diagnostic value of the blood changes in trichiniasis. It was only the persistence of the eosinophilia in this case which led to the recognition of the rare complication present with the typhoid fever.

The Weight of the Brain in Man.

An interesting article by Dr. F. Marchand appears in the *Journal of the Scientific Society of Saxony* (vol. xxvii, p. 389), of which an abstract is made in the *Centralblatt für die Physiologie* (1902, p. 294). Dr. Marchand has weighed the brain in 1234 cases, usually immediately after its removal from the body and whilst still enclosed in the dura mater. The subjects were Hessians, and the results which he obtained may be briefly stated as follows:

The mean weight of the brain in the male sex between the ages of fifteen and eighty years was 1400 grammes, and in females it was 1275 grammes. The brain in 84 per cent of all adult males between the ages of fifteen and eighty years weighed between 1250 and 1550 grammes; in about 50 per cent it weighed from 1300 to 1450 grammes; in about 30 per cent it was over 1450 grammes; and in only 20 per cent under 1300 grammes. In women 91 per cent of all the adults had a brain weight between 1100 and 1450 grammes, 35 per cent weighed 1200 to 1350 grammes, 20 per cent over 1350 grammes, and 25 per cent below 1200 grammes. Dr. Marchand found that the brain weight at birth doubled in the course of the first nine months of life, and trebled before the expiration of the third year. After this date the increase was much slower, and slower in females than in males. Its definite or ultimate weight was reached in males at about the nineteenth or twentieth year, and in females from the sixteenth to the eighteenth year.

The diminution of the mean weight of the brain which is due to the supervention of senile atrophy occurs in males in the course of the eighth decade, and in females of the seventh, though without doubt great individual differences are observable. The increase of the mean weight of the brain in childhood follows the growth of the body generally till it reaches a length of 70 centimeters independently of age and sex, but from this point onward

it becomes irregular and is always smaller in females. In adults there is no constant relation between body weight and brain weight. Still, the mean weight of the brain in males of short stature (from 150 to 160 centimeters) is rather less than those of the average height, and the same holds good for women under 145 centimeters. The smaller size of the brain in women is not dependent on the lower stature, for the mean weight of the brain in women is without exception smaller than that of males of equal height. The conclusions of Dr. Marchand are drawn from data which are contained in numerous statistical tables.—*Lancet*, Nov. 29, 1902.

The Etiology of Acute Articular Rheumatism.

Many organisms, according to G. W. Webster (*Journal of the American Medical Association*, Jan. 10, 1903), produce arthritis. Probably all cases of acute articular rheumatism are due to infection.

Probably all organisms known to cause either acute articular rheumatism or other forms of arthritis also give rise to other pathological conditions as well.

It would thus seem not merely a local infection or inflammation, but a general infection, the commonest seat of the principal lesion being the joints, but also involving the heart, both endocardium, pericardium, and muscle, occasionally the meninges and other structures, and caused by a diplococcus circulating freely in the blood. The diplococcus seems to be merely a germ capable of causing wide-spread inflammation, and the joints are included in its sphere of action. Just as in pneumonia, we may have general infection with local manifestations or inflammatory reaction in the meninges, the pleura, the endocardium, pericardium, postnasal space, peritoneum, lymphatics, and lungs, the latter being probably the usual site of the localizing inflammation.

It is quite possible that there is some hereditary diathetic or constitutional peculiarity, the nature of which is completely unknown to us, which may favor infections in general, and possibly that of rheumatic infection in particular.

That there may be varying degrees of susceptibility depending on exhaustion, depressing influences, as cold and the like, seems reasonable. These are the occasions, not causes. They favor but do not cause.

That susceptibility varies greatly there can be no doubt. Whether this depends on alkali tension has not yet been demonstrated, but it seems plausible on the ground of variation in the

bactericidal action of the blood. This may explain the value of alkalies in the treatment of rheumatic affections.

Diabetes Insipidus.

Futcher (*Johns Hopkins Hospital Reports,* vol. x, p. 197) reports the clinical histories of five cases of diabetes insipidus, and a large series of observations on the variations of the condition relative to diet, fluids ingested, etc. He believes that the old classification under the headings of hydruria, azoturia, and anazoturia is no longer tenable, the nitrogenous constituents of the urine being almost entirely dependent on the nature of the food. Clinically the cases come under two headings—the primary cases in which there is no evident organic basis for the disease, and the secondary cases where there is some definite organic lesion of the nervous system. Tumors involving the floor of the fourth ventricle and the medulla, cerebral hemorrhages, and basilar meningitis are the commonest of the lesions, and cerebral syphilis in the form of basic meningitis is apparently more frequently the cause than is commonly supposed. Four of the five cases recorded gave evidence of marked cerebral disturbance; one was undoubtedly and two probably due to cerebral syphilis, one due to some cerebral disease, and the remaining case to some condition of unknown character. Antisyphilitic treatment is uncertain in results, but sometimes very successful.

The Transmissibility of Human Tuberculosis to Cattle.

J. Fibiger and C. O. Jensen (*Berliner klin. Wochenschrift*) made five experiments to demonstrate the transmissibility of human tuberculosis to cattle. All these cases were from assumed primary intestinal infection. In two cases infectious material was taken from the intestines post mortem. One calf was inoculated directly into the pleural cavity, in the other case infectious material was first passed through a guinea-pig, the spleen from this pig being then inoculated into the peritoneal cavity of another calf. The results were positive, though the lesions were not diffused. In the other three cases, those of children, a more decided result was obtained; the bacillus showed a marked virulence for the calves. From these experiments the inference might be drawn that the infections were originally those of a bovine tuberculosis; furthermore, these different results may bring up the ques-

tion whether the tubercle bacillus of a bovine tuberculosis after a long habitation in the human body may not lose its virulence for the calf.

THERAPEUTICS.

Radiotherapy and Phototherapy in Carcinoma, Tuberculosis, and Other Diseases of the Skin.

J. W. Hyde, F. Montgomery, and O. S. Ormsby (*Journal of the American Medical Association*, Jan. 3, 1903) say that while it is too early to form definite and sweeping conclusions regarding the value of radiotherapy and phototherapy in all the affections in which they have been employed, their experience leads them to believe that in tuberculosis of the skin these methods of treatment are superior to any others known to them. In lupus erythematosus, phototherapy has in their hands given very satisfactory results, far better than those obtained by any other method.

In superficial carcinoma involving considerable areas, radiotherapy is undoubtedly preferable to all other known methods of treatment. Superficial lesions more circumscribed are equally amenable to treatment with the *x*-rays, though in many instances small tumors can be removed more promptly by complete erasion or excision. For many of these circumscribed growths the authors are now inclined to advocate removal either with the knife or curette, followed by a series of treatments with the *x*-rays. In operable carcinoma of the skin which includes deeper tissues, they advocate complete extirpation followed by *x*-ray treatments. Where the growths are inoperable radiotherapy offers a possible chance of recovery, or of lessening the discomfort of the patient. As a result, however, of observations of their own and other cases, they believe that in exciting an inflammation in carcinoma one is, to some extent at least, encouraging an extension of the growth through a dissemination of the cancer cells to normal (or inflamed) tissue surrounding the growth, and of favoring metastases. They believe this possibility constitutes a danger in the treatment of carcinoma by the *x*-rays that has not been sufficiently recognized.

The value of radiotherapy in extensive cases of hypertrichosis has been fairly well established by other observers. It has given the writers excellent results in the majority of cases of psoriasis treated. It has unquestionably been used successfully in many of the chronic inflammatory diseases of the skin, especially in acne

rosacea, folliculitis, and suppurating wounds; but until this agent can be employed with greater accuracy they believe it should be reserved chiefly for those cases in which better known and better controlled methods are not successful.

It is not yet possible to draw definite conclusions with reference to the comparative values of radiotherapy and phototherapy. The former is, for the most part, readier of application, and apparently has a wider field of usefulness than the latter. In lupus erythematosus, however, phototherapy has repeatedly given excellent results where the *x*-rays have failed altogether or aggravated the condition. Judging from their experience, and from the larger experience of Finsen and others in the treatment of tuberculosis of the skin, the authors believe that in this disease phototherapy gives in the end results as rapid as those obtained with the *x*-rays, with better cosmetic effects and without danger of deep burns.

There is no doubt that both phototherapy and radiotherapy are valuable additions to our methods of treating certain diseases. There is also no doubt that their field of usefulness eventually will be proven much more restricted than that in which they are employed at present. Unfortunately there can be no doubt also that harm is doing and will be done by the action of the *x*-rays in the hands of the unskilled or the unscrupulous. No one should attempt to employ radiotherapy who has not first carefully studied the subject and followed the work of some expert. Even with such preparation great caution is needed in acquiring experience with this new therapeutic agent; its accurate control and the character of results obtained being still subjects of discussion.

Prophylactic Treatment of Diphtheria.

The prevention of diphtheria by prophylactic serum treatment is discussed by Sevestre (*Ann. de Méd. et Chir. Infan.; British Medical Journal,* Dec. 6, 1902). He recommends antitoxin injection for all the children in a family wherein diphtheria has broken out, except when isolation has been strict and early. Even then the other children should be constantly observed and tested bacteriologically. Twenty-five per cent of the children exposed to infection will be found to have diphtheria bacilli on their mucous membranes. Of 502 cases Netter injected for protection, bacilli were found in 150; of the whole number 13 caught the disease, but none of them after the first twenty-four hours or before the twenty-eighth day, and none

died. The protection is well known to last for that period from the time of injection.

Among 491 children similarly exposed to infection in the same epidemic, but not injected, 87 took the disease and 18 died. When a case of diphtheria occurs in a hospital the other children should be injected. Heubner, at the Charité in Berlin, makes injection compulsory for every child admitted. Especially necessary is it for the scarlet fever cases to be followed, and above all those of measles. Richardiere, having had 30 cases of diphtheria complicating measles during the first five months of 1901, thereafter injected all his measles cases, and not a single one was attacked by diphtheria during the remainder of the year. Antitoxin must be injected in double doses for measles, and repeated in a fortnight, as its effects are somehow diminished in that disease. The ordinary dose for a child is 250 units, according to Heubner, 300 to 500 units according to Italian physicians, and double these for measles. Only one case in 2500 children treated thus preventively had any after-effect from the injection, and that was not of a serious nature. Adults, on the other hand, react so violently that protective injection is quite undesirable in their case.

Severe Case of Scarlet Fever Treated with Normal Blood Serum.

C. S. Engel (*Therapeutische Monatshefte,* 1902, No. 9) figures that nature's method of overcoming infectious diseases is as follows: The etiological factor causes the formation of immune bodies on the part of the body cells; with the help of these the already present alexins destroy the invading body. If the disease is withstood new complements are built up in place of those already used, while the immune bodies are still retained in the serum for some time. If the disease terminates fatally, the cause is either an insufficient quantity of amboceptors, the using up of the complement, or the want of both. These facts led the author to use fresh normal human blood serum in a severe case of scarlet fever, with surprising results. Although the author does not wish to conclude that normal serum is indicated in similar cases, he believes it demonstrates that the active protecting bodies are but too often wanting in severe infections. The quantity of serum used in this case was 8 cubic centimeters. The serum must not be allowed to stand too long, as the alexins soon break up, and the injections should be given early in the disease before the specific poison has united with the body cell.

On the Treatment of Glycosuria and Diabetes Mellitus with Aspirin.

R. T. Williamson (*British Medical Journal,* Dec. 27, 1902) recommends the use of aspirin in the treatment of glycosuria and diabetes mellitus. He says that the drug has the most influence in the less severe forms of diabetes mellitus and in chronic glycosuria. In the most severe and acute forms in young people he has not been able to detect any definite change in the sugar excretion by the use of aspirin. The dose of aspirin required to produce a decided diminution of the sugar excretion in the less severe forms of diabetes is rather large, 15 grains four, five, or sometimes six times a day. The drug requires to be watched, for it sometimes produces noises in the ears and other toxic symptoms of the salicylates. It is best to commence with a small dose, 10 grains twice or three times a day, and to increase up to 15 grains four or five times a day, and in some cases six times a day if no noises in the ears or toxic symptoms occur.

On the Use of Suprarenal Extract and Adrenalin.

Dr. Ivanoff (*Medicinskoe Obosrenie,* vol. lvii, Nov. 11, 1902) has made a study of the therapeutics of the suprarenal extract and adrenalin, and from his observations he finds suprarenal extract to be an exceedingly energetic vasoconstrictor and may be successfully used as a hemostatic in hemorrhage of internal organs—the lungs, stomach, uterus, kidneys, and intestines—as well as in external mucous membranes. He finds adrenalin a most potent agent in the prevention of hemorrhage during operations upon mucous membranes. Suprarenal extract is useful in acute and chronic inflammations of mucous membranes. The use of these agents is free from any harmful or unpleasant effects.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Subcutaneous Paraffin Injections in Nasal Surgery.

Mr. Walker Downie (*British Medical Journal,* Nov. 8, 1902) details the technique of his methods of relieving nasal deformities by the use of paraffin.

Thorough preparation of the operation area should be made by cleansing the skin of the nose, the forehead, and the cheeks,

twelve hours before the injection, with spirits of turpentine, followed by rectified spirits of wine and 1-in-40 carbolic solution. A carbolic dressing should also be worn over night. Immediately prior to operation these same parts should be well washed with 1-in-20 carbolic solution. About a quarter of an hour before the operation a band of celloidin is painted across the nose at the level of the eyes, and is continued downward along the line of junction between the nose and side of the cheek. The celloidin, when it sets, by its pressure tends to prevent the paraffin from spreading into the surrounding subcutaneous tissues.

The author uses a paraffin with a melting-point of from 104° to 108° F. The syringe employed is a ten cubic centimeter glass serum syringe. The patient may or may not be anesthetized. In order to keep the needle warm and to prevent the paraffin solidifying in it, the proximal half of the needle, including its collar, is bound round with cotton thread for purposes of insulation. A piece of fine platinum wire is bound round the needle and its collar and over the thread, each end of the platinum wire being soldered to a separate copper wire. The two copper wires are fixed to the terminals of a storage battery (with a rheostat). The platinum wire can now be heated as desired, and in this way the needle kept warm. Too much paraffin should not be injected. Before the needle is withdrawn, a piece of gauze, soaked in cold sterilized water, is applied over the nose, so causing the paraffin, which by this time has been molded into position, to set immediately.

The causes of failure are set down by the author as follows:

1. Insufficient antiseptic precautions.
2. Want of suitable apparatus.
3. Injection of an excessive quantity of paraffin.
4. Insufficient digital pressure around the nose whilst the paraffin is being injected.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Some Cases of Puerperal Sepsis and Their Treatment.

W. S. Stone, at a recent meeting of the New York Obstetrical Society (reported in *New York Medical Journal*, Dec. 20, 1902), read a paper thus entitled.

An experience with twenty-seven cases in the septic service of the Society of the Lying-in Hospital formed the basis of the paper. The histories of nine were related in detail, together with the pathological and bacteriological reports of three autopsies.

There were sixteen examples of septic intoxication, eight of septicemia, one of pyemia, and two of doubtful origin. The important features of these cases were as follows: With the exception of putrid uterine contents, appreciable lesions of the pelvis were frequently absent. Distinct evidences of the effect of septic poisons upon the kidneys were very constant. A similarity of some cases of eclampsia to those of septic intoxication was noted. Lesions in the lungs were a frequent manifestation, the chief characteristics of which were their variability in kind and degree. Destruction of the red cells and hemoglobin were present to such a marked extent in some cases that treatment of the blood required the chief consideration.

As a measure for preventive treatment, the more general use of rubber gloves in obstetrics was recommended. Aseptic rather than antiseptic methods in the local treatment are to be preferred. An intra-uterine exploration, usually under anesthesia, and the cleansing of the interior of the uterus with fingers or instruments, were urged in every case at the beginning of treatment, unless there were infected wounds of the vagina or cervix which were presumably the cause. Subsequent intra-uterine douching was rarely necessary. Special attention was directed toward such general measures as forced feeding, stimulation, the use of iron, and abundance of fresh air.

The successful outcome of many apparently hopeless cases, treated by such measures, should make one carefully deliberate before adopting operative procedures, although the result of the autopsies in two of the writer's cases showed that hysterectomy would have been indicated if there had been an early appreciation of the pathological condition.

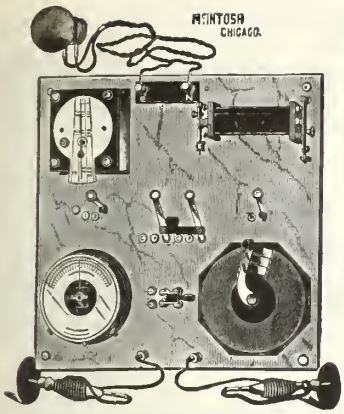
Sloughing of Abdominal Wound after Removal of Ovarian Cyst Infected with Pneumococcus and Staphylococcus.

Watkins (*American Journal of Obstetrics*, September, 1902) operated on a patient with an abdomino-pelvic tumor, which was diagnosed as a fibroid. The patient had previously been in good health, able to go about. The peritoneum was closed by dry catgut, the fascia by chromicized catgut, and the skin by silkworm-

gut. The cyst (with which the uterus was removed, as that organ contained a fibroid) seemed malignant, but on microscopic examination no indication of malignancy or tuberculosis was found, but there was an extensive purulent inflammation of polymorphonuclear leucocytes involving all tissues, with much fibrinous exudate and necrosis. Staphylococcus albus was found in abundance, as well as pneumococcus. Acute laryngitis and bronchitis, with suspicion of small patches of lobular pneumonia, followed the operation; but no pneumococcus was found in the sputum. On the fourth day the dressings were found saturated; the tissues included in the sutures in the lower angle of the wound had sloughed out. All the skin sutures were removed to allow of better drainage; then it was seen that all the deeper sutures had become detached by sloughing. There were no adhesions, and the intestines presented freely in the wound. A copious exudation of serum escaped; culture showed a pure staphylococcus infection. The patient died twenty-four hours after the escape of the infected serum.

Sarcoma of the Ovary.

Stauder (*British Gynecological Journal,* November, 1902) reports upon twenty cases from the Wuerzburg Frauenklinic, of which five were round-celled and two spindle-celled sarcoma, seven of mixed form, and six endotheliomata. They were met with in 295 cases of ovariotomy—*i.e.,* in 6.78 per cent—and comparatively often in young persons, and even under the age of twenty. Their diagnosis was not assisted by any pathognomonic characteristics; the results of operation, when the tumors were unilateral and removed early, were not unfavorable; there were seven deaths (31.58 per cent) occurring from one day to six months after operation. He attributes the fact that the permanent results were so favorable, compared with those of carcinoma, to the large proportion of the ovarian sarcomata being unilateral and little inclined to metastases, and also to the tumors being generally free from adhesions and provided with good pedicles, so that it was possible to make a clean operation.



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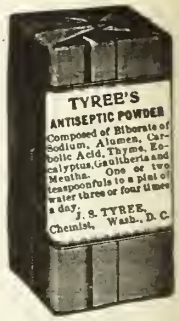
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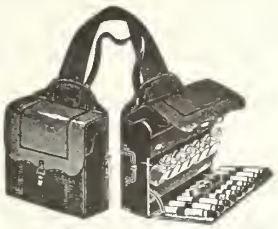

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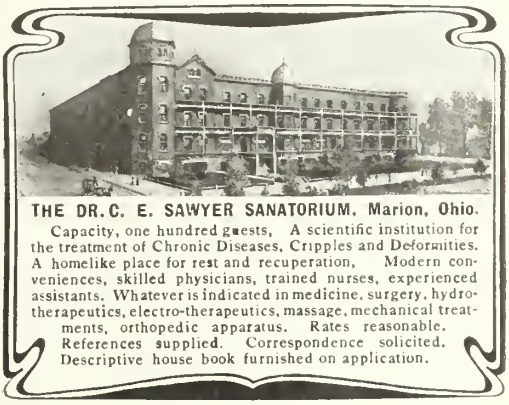

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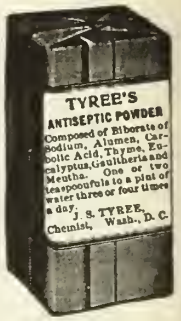
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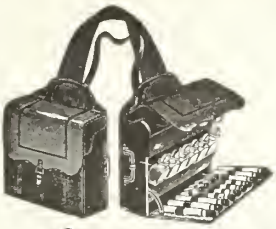

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THE MEDICAL AGE

VOL. XXI. DETROIT, FEBRUARY 10, 1903. NO. 3.

ORIGINAL CONTRIBUTIONS.

CHRONIC PROCTITIS.

BY J. A. MAC MILLAN, M.D., DETROIT, MICH.

The amount of literature on this subject is comparatively small, and I have been compelled to confine myself almost exclusively to my own observations. These have not been sufficient to form premises for positive or final conclusions, and yet the eight cases that have come under my observation during the last year may be a basis for some practical suggestions.

From this experience I am convinced that owing to the indefinite symptoms of certain forms of chronic proctitis a diagnosis is scarcely possible without a thorough examination with a proctoscope, and accordingly the nature and location of the trouble is frequently overlooked, and the constipation, nervousness, and ill health ascribed to other than the real cause.

There is a great variety of symptoms; some of them are quite suggestive of rectal disease, but I do not think they could be considered pathognomonic.

Constipation, when the inflammation is located in the valvular portion of the rectum, is the most marked symptom. It is the trouble for which the patient usually seeks the advice of the physician. But constipation is by no means pathognomonic; it often depends on other causes, and in patients in whom no signs of disease can be found in the rectum. Nevertheless, chronic proctitis and chronic constipation are frequently coexistent, and in such cases are unquestionably interdependent: the relief of the one is followed promptly by the relief of the other.

In marked cases of chronic constipation, where faulty diet and other obvious causes can be excluded, a thorough rectal examination should be made. In a fair proportion of these the cause will be discovered, and quite frequently it will be found to be a chronic inflammation. Sometimes this is diarrhea, or

the two conditions may alternate. With the diarrhea there is tenesmus. When the inflammation is in the upper portion of the rectum there is little or no pain. Occasionally the patient complains of dull pain in the sacrum. When the inflammation is in the region of the sphincters pain is always considerable.

The nervous system seems to be particularly affected; the patients suffer from insomnia, hysteria, and the various neuroses.

The diagnosis depends chiefly upon a proctoscopic examination.

The inflammation is usually confined to a well defined area that shows little tendency to spread. The affected portion is a deep red, in contrast to the pale pink of the normal. However, the normal mucous membrane varies considerably in color, and it requires a little experience to distinguish the redness of inflammation. After the use of enemata of water, or after strong cathartics, there is a congestion which resembles inflammation, but it persists only for about twenty-four hours, and is not confined to definite areas. Congestion in the region of the sphincters, which is often localized and may persist for a length of time, is distinguished from inflammation by the absence of severe pain.

There is usually mucus found where there is chronic proctitis. However, the mucus found in the rectum may have been carried from some portion of the colon. When it comes from the small intestine it is intimately mixed with feces, and this characteristic serves to distinguish it.

In cases of long standing ulcers may form, more especially in the lower portion of the rectum.

Hypertrophy is the most important feature of chronic proctitis. This must be distinguished from the thickening due to inflammatory engorgement of vessels and infiltration of tissue. The latter yields readily to palliative treatment. Where there is hypertrophy of the rectal mucous membrane the distention when air is admitted is tardy, and the tissue crowds into the proctoscope; the folds are much coarser than normal, and there is a temporary prolapsus of the mucous coat when the intra-abdominal pressure is increased. This latter arises from the loss of flexibility and the thickness of the folds. In other words, there is a real redundancy of tissue.

Another condition is hypertrophy of the rectal valves. To test this pressure is exerted upon the margin and directed toward the base. The normal valve offers very slight resistance. Hypertrophied rectal valves form a mechanical obstruction to the passage of feces and account for constipation in patients otherwise perfectly healthy. The condition may persist after all other signs of inflammation have subsided.

To summarize the signs there are the following:

1. Areas of persistent redness.
2. Clear mucus.
3. Hypertrophy of mucous membrane with coarse folds and redundant tissue.
4. Tardiness in distention.
5. Hypertrophy of valves.

The Etiology of Chronic Proctitis.—There are two common causative factors mentioned by authorities, viz.: the passage of constipated stools and the administration of drastic cathartics. Whether these are primary causes I am not prepared to say, but they are undoubtedly often responsible for the continuance of the inflammation. After the use of strong cathartics, such as aloes, podophyllum, or any of the acrid cathartics given in effective doses, the mucous membrane of the rectum becomes intensely congested, quantities of mucus are present, and this congestion does not subside for twenty-four or thirty-six hours. For many years the only relief for patients suffering from constipation where no cause could be found was from the use of cathartics. Larger and more drastic doses become necessary, and in many cases enemata must be used. We have been accustomed to attribute this state of things to "habit" or "tolerance of drugs." In such cases a proctoscopic examination is a revelation that robs habit of much of its assumed potency. I do not know that I should hesitate to state that "habit" deserves no more significance when applied to habitual constipation than it would have if applied to habitual retention of urine or habitual amenorrhea.

Another factor which may have something to do with the causation of rectal inflammation is difficult and prolonged labor where the head is retained in the pelvis for many hours. Many women date their ill health and constipation as well as other more significant symptoms from a certain confinement. In a number of these patients a thorough examination of the perineum, uterus, and ovaries will reveal the cause. In some cases the trouble is more general, such as anemia, worry, or disturbed rest. These things must be all considered. But in other cases there is injury to the rectum, which either produces inflammation directly or so impairs its blood-vessels and nerves that there is a susceptibility to congestion and eventually proctitis. A case that came under my notice in 1898 might be cited in illustration. This woman was in labor three days, and was finally delivered with instruments. Up to the time of this confinement she had always been healthy and never had been constipated. There was a laceration of the cervix. The patient made an uneventful recovery. Six

months after the confinement the laceration was repaired. From the birth of the child the mother was greatly troubled with constipation, was never quite well, was unable to walk as she used to, and was troubled with what she called nervousness. After the trachelorrhaphy she felt better for a few months, but soon became as before. In 1900 she was taken with vomiting after meals, aggravation of the constipation, with ill-defined pains in the rectum and lower portion of the abdomen, and nervous excitement. The nervous symptoms were peculiar. One of these was talkativeness. At first it hardly attracted attention, but after a few days it became perpetual. At first also it was only the amount of conversation that was noticeable, but later reality and fiction were not distinguished. The other neurotic symptom was a most intractable insomnia. There was little disturbance of temperature, and the pulse varied from 80 to 100, but was quite strong. She complained of great pain in the rectum during defecation, yet digital examination was not painful and discovered nothing abnormal. I was inclined to give her an anesthetic and make a more thorough examination, but the nervous symptoms were so pronounced that I called in a neurologist. At this time the nurse reported considerable mucus and some blood in the stool. However, the patient soon became entirely irrational and maniacal, and was removed to a sanitarium, where after six weeks she began to slowly recover. No very satisfactory diagnosis was made. In July, 1902, the patient began to manifest the same symptoms—the same rectal pains, obstinate constipation, and nervousness. A proctoscopic examination revealed an acute inflammation of the valvular portion of the rectum. Now I am convinced that the severe illness in 1900 was acute proctitis aggravated by cathartics, and the nervous symptoms were the direct result. The history of the case is as follows: (1) Very difficult and protracted labor in 1898, producing a (2) chronic proctitis; (3) acute proctitis in 1900; (4) second attack of acute proctitis in 1902.

This case is somewhat unusual, for I believe acute proctitis confined to the upper portion of the rectum is not common, whereas chronic proctitis is relatively common in this location.

In such cases as this, where a woman complains of constipation, rectal trouble, and general ill health, it is not sufficient to repair lacerations and examine for hemorrhoids and ascribe the residue to debility or inherent lack of vitality, for the trouble may be in the upper part of the rectum, and this requires a thorough examination.

Treatment.—Simple uncomplicated cases of chronic proctitis

without hypertrophy are very amenable to treatment with applications of olive oil, silver nitrate, ichthyol, and tincture of iodine. These may be applied as a spray or with an applicator. Where there is a moderate amount of hypertrophy massage gives good results.

Cathartics are contraindicated; the least harmful are the salines. Enemata of water are followed by much congestion.

Olive oil injected high in the rectum is the best means of moving the bowels. After the injection the patient should be kept in a reclining position for several hours.

The diet should be restricted and should not contain much waste material.

Physical exercise if at all excessive is injurious.

In constipation due to other causes the indications may be quite the reverse of these.

The cases that require operative interference are pronounced cases of hypertrophy of the rectal valves, and I believe certain cases of hypertrophy of the mucous membrane. In the latter the redundant tissue is pushed down in front of the descending feces and forms a temporary obstruction at the rectal valve. In such cases division of the rectal valve gives more room. While valvotomy is a tedious and difficult operation and requires the very best facilities, it is practically devoid of danger. A general anesthetic is not necessary, there is very little pain, and excessive hemorrhage is uncommon and can be always controlled by thorough packing of the rectum. The management of the light is of importance, as the operation must be done through a proctoscope, and the light must be kept on the field. Either a reflected or a direct light may be used. I have found it convenient to have both, so that a change may be made. The instruments used are a proctoscope, a bistoury with a long handle, a special needle for passing sutures, a long crusher for the shot, and long handled forceps. Catgut, shot, and material for tamponing complete the requirements.

The patient's bowels should be moved thoroughly the previous day, but there should be no enema or catharsis on the morning of the operation.

Everything should be in perfect readiness before the patient is placed on the table. The patient should be placed in the knee-chest position, and made as comfortable as possible.

The proctoscope should be entered and pushed just above the internal sphincter, and the obturator withdrawn, then advanced till it touches upon the valve to be incised. Much manipulation of this valve should be avoided as it produces muscular contraction,

which interferes with its clear outline. Having located the point at which the incision is to be made, I pass a ligature on each side and use these instead of forceps to hold the valve steady. After the incision is made these may be secured with shot, and if there is not much hemorrhage and the sutures have been entered well down toward the base of the valve, these may be all the sutures necessary. If, however, there is not good approximation of the cut edges other sutures must be used.

During the operation hemorrhage is controlled by means of pledgets of cotton held by forceps. The operation is completed by packing thoroughly with sterilized gauze. The patient should be kept in bed for a week. If there is postoperative hemorrhage the packing must be withdrawn and the rectum tamponed again. Dr. Martin, of Cleveland, does this operation with remarkable skill. Instead of using ligatures as described here, he employs forceps to grasp the valve on either side of the point selected for the incision.

During the past six months I have done four valvotomies. In two of these the operation gave no relief of the constipation or of the other symptoms. In the first case I attribute the failure to faulty technique. The operation was done at the patient's home. The other patient is a woman aged fifty-four, constipated for years, appetite poor, pain in the sacral region. The second valve was hypertrophied and there was a small polypus directly on the margin. I performed valvotomy on May 26, 1902, at Harper Hospital, and at the same time removed the polypus. The patient's health, which had been failing for six months previous to the operation, still continues to decline, she is quite jaundiced, and I believe there is some hepatic trouble.

My other two cases were followed by the most gratifying results. One of them was a particularly bad case. She had been constipated for about ten years, and during that time had taken a great variety of cathartics. Eventually these became ineffectual, and with great difficulty, by the use of several enemata, a movement of the bowels would be accomplished. After this she would suffer for twenty-four hours with much pain and exhaustion. Valvotomy was done at Harper Hospital without an anesthetic in April, 1902, with immediate relief of the constipation; and the patient reported to me in December that she had gained ten pounds in weight during the summer.

The other patient's condition was not so urgent. For months at a time when in the country she suffered very little, but when she returned to the city ill health and constipation began. The hypertrophy affected the mucous membrane and the lowest valve.

The operation was performed at her home in Trenton, Mich., with the assistance of Dr. Osborn. The constipation was immediately relieved.

In all my cases treatment by applications and massage was tried first, before resorting to operation.

From my experience in this field I feel warranted in making the following practical observations:

1. In all cases of constipation or diarrhea where the cause is not elsewhere definitely located a thorough rectal examination should be made.

2. Acrid or drastic cathartics produce much irritation and congestion of the rectal mucous membrane, especially in cases of chronic proctitis. These drugs should be restricted in their use and saline cathartics substituted when possible.

3. Physical exercise in certain cases of constipation is harmful.

4. Straining at stool is particularly injurious in patients who have hypertrophy of the rectal mucous membrane. A temporary prolapsus is produced, and this causes occlusion.

In two cases I found small growths. One of these was a simple polypus; the other is in a patient examined about a week ago. This has an appearance of malignancy. I am not prepared to say that any pathogenetic relationship exists between chronic proctitis and malignant disease of the rectum, but more frequent rectal examinations would at least discover it in its incipiency, when successful intervention is possible.

ACETOZONE IN TYPHOID.

BY JOHN F. BENNETT, M.D., DETROIT, MICH.

During the average physician's practice the administration of drugs is so often followed by disappointment that we soon find ourselves skeptical concerning the action of many of them. Experience alone is the only factor which will clear up doubts and prove conclusively to our minds the efficacy or uselessness of any drug or preparation. Among the many remedial agents which experience has demonstrated to me as having a positive beneficial and curative action in certain conditions and diseases, none is more marked and more positive in my mind than the new germicide acetozone. I have employed it in both acute and chronic conditions, and found its action prompt and lasting. I might mention briefly a few cases in which I have employed acetozone with either curative or marked beneficial results.

Case 1.—Male, twenty-five years of age, had a chronic diarrhea for 1½ years. While no culture had been made, several physicians had pronounced the case tubercular. I had treated the case twice—for two or three weeks each time. I prescribed a great variety of intestinal antiseptics and astringents with very little, if any, improvement. The patient becoming dissatisfied employed a number of physicians. Upon his last return to me I prescribed acetozone, 20 grains to a quart of boiled water, and asked him to drink from 8 to 16 ounces of this solution in twenty-four hours. The patient's regular weight was from 165 to 170 pounds. By this time he had reduced in flesh to scarcely 135 pounds. He was having from eight to ten loose stools daily, containing a substance resembling a mixture of mucus and pus, occasionally streaked with blood. In less than forty-eight hours they were reduced to half this number, and in less than one week the stools did not number more than one or two in twenty-four hours. He immediately began to regain flesh, and in a remarkably short time he was so improved as to return to his former occupation, that of a carpenter.

Case 2.—Female, forty-eight years old, had chronic diarrhea and constant pain in the intestines during the past three years. Strict attention has been paid to the dietetic treatment, and drugs of all descriptions have been used with scarcely a temporary improvement. The patient had from three to six loose stools a day, but suffered more from pain than from the number of stools. This patient did not lose in flesh to any great extent. Do not believe it tubercular. This patient is the wife of a physician, and received the very best attention. I was called in consultation and advised the use of acetozone, 20 grains to a quart of distilled water. The effect (while not as prompt as in the previous case) was pronounced and positive. In less than a week the stools were reduced one-half in number and the pain lessened. This treatment was begun several weeks ago, and at this writing the patient suffers little or no pain, and never at any time has more than two stools, usually only one, in twenty-four hours.

Case 3.—Male, aged forty-eight, had been confined to his bed with inflammatory rheumatism for over eighteen months. Four or five months ago his bowels became loose, and he had on an average from eight to ten stools in twenty-four hours. Medication of any description has been of no avail. I at last prescribed acetozone, 20 grains to a quart of distilled water, and in less than four days the number of stools was reduced to one or two in twenty-four hours, and have remained entirely under control since (two months).

Case 4.—Male, aged twenty-five, came to me at 9 A.M. and stated that he had had a profuse diarrhea and cramps in the bowels during the preceding twenty-four hours. His face indicated that he had suffered considerable pain, and he seemed quite weak. The stools were as often as one an hour. I prepared in my office a solution of acetozone 10 grains to a pint of distilled water, and asked him to keep it in his pocket and take 2 ounces about every two hours, informing him that I wished the bottle to be emptied before eight o'clock that evening. He reported on the following morning, and stated that he had had no movement of the bowels since four o'clock of the previous day. The pain had promptly subsided, and he said he was feeling all right.

Up to date I have not had experience enough with acetozone in typhoid fever to be able to state positively as to whether it will shorten the duration of the disease or not. I, however, have proven to my own satisfaction that it will control the diarrhea prevalent in this disease, and without any question it is one of the best intestinal antiseptics upon the market to-day.

SOME HABITS OF MALARIA NOT CONTROLLED BY THE MOSQUITO.

BY CHAS. HICKS, M.D., DUBLIN, GA.

The circular letter hereto attached, from the United States Geological Survey, Department of the Interior, at Washington, handed me through the postmaster at Dublin, prompts this paper:

DEPARTMENT OF THE INTERIOR,
UNITED STATES GEOLOGICAL SURVEY.

WASHINGTON, D. C., April 29, 1901.

DEAR SIR—We are preparing a report on the use of underground waters from deep wells in Eastern and Southern United States, and desire to obtain information as to the relations of these waters to the health of communities which use them. I should be greatly obliged to you if you would send me information as to your experience in this connection. I understand that there are deep wells in your vicinity, and we desire to know whether you find that persons who restrict themselves to the use of the underground waters have immunity from, or decreased liability to, malarious diseases, typhoid fever, etc. Will you kindly state your observations on this line, giving such illustrations as you think will be of general interest? I should like to know also the depth of the wells which furnish the water in question. A prompt reply will be greatly appreciated. The enclosed envelope will carry it free through the mails.

Yours with respect,
CHAS. D. WALCOTT, Director.

The answers to the direct questions are: The depth of the wells in Dublin ranges from two hundred to five hundred feet;

the reduction in the frequency of the two diseases named, from the use of artesian water,[1] has doubtless been in proportion to the infections ingested heretofore through drinking water.

The observations submitted here come as a thesis, on features of malaria not understood, which doubtless will prove more prominent on account of what it does not teach than from the information it brings; though should it stimulate and engage thoughtful attention, in the direction aimed at, the writer will feel that his efforts have been rewarded. I beg to be permitted, just here, to state that it is to be regretted that the valuable suggestions, in ably presented views for State legislation, regarding malaria in 1897 by a distinguished physician of this city, Dr. Le Hardy, were disposed of with only courteous recognition.

In dealing with an unsolved problem—such is malaria—the writer finds it difficult to systematize the work in a manner to bring out those features desired to be most prominent. The pathologist has demonstrated beyond cavil the parasitic origin of the disease called malaria, with this clear-cut diagnosis, and the therapeutist, armed with an unquestioned parasiticide; still, from the hemoglobinuric type of malaria, the latest name for one of the most fatal forms of the malady, the great mortality rate, in the prognosis, is a shadow that does not depart—a specter that will not down. Such a problem should claim for its solution the aid and patient endeavor of the profession, especially those members engaged along its lethal pathway.

Prominence given malaria in medical literature for more than a hundred years would have us know that during no time of its history has the profession held the mastery of it. The vast increase of our knowledge in medicine during the past quarter of a century brings us but to the threshold of its investigation, understanding, and treatment. The term malaria is inexact and misleading, as used, and in the treatment of the malady we are but little in advance of the nomadic tribes found in possession of this country on its discovery, who, legend tells us, were also in possession of and using the antidote cinchona. We found them as well annually pilgrimaging to the mineral springs among the foothills of the Blue Ridge, to dissipate the malaria cachexia. The extremely high mortality rate from malaria given out in the vitality statistics from New York City, Brooklyn, and Baltimore

[1]Artesian water, in this immediate section, is becoming a problem in the practice of medicine. The writer's case-book shows a greater proportion of ailments since than before its use, irritating the renal structures. The lime and other deposits prohibit its use in steam boilers.

during six years ending in 1890 should not be considered seriously by reason of the desultory use of the term malaria. Thus:

In New York, deaths from malarial fever 2060, or 24.62 per 100,000 of average population. Deaths from typhoid fever 2031, or 24.27 per 100,000 of average population.

In Brooklyn, deaths from malarial fever 1413, or 32.62 per 100,000 of average population. Deaths from typhoid fever 1002, or 23.13 per 100,000 average population.

In Baltimore, deaths from malarial fever 934, or 41.51 per 100,000 population. Deaths from typhoid fever 904, or 40.17 per 100,000 of average population.

These compiled statistics, quoted from Thayer, include the pernicious malarial fever imported from tropical climates. In the city of Baltimore, during a period of seven years, covering two of the years included in the above named census, statistics compiled under careful diagnostic precaution showed that there were, in the Johns Hopkins Hospital, 48 deaths from typhoid fever and 3 from malarial fever. In other words, in the hospital, a proportion of 16 deaths from typhoid to one of malarial fever, while outside the deaths reported from malarial fever were in excess, the proportion being as 1.01 to 1. Thus, when the diagnosis is properly vouched for, we are forced to the conclusion that the term malaria is too frequently and recklessly used. Discouragement should not come of this frequently and misapplied term malaria, nor the bad nomenclature for that matter, for within the memory doubtless of some of my readers dropsy was given, in our literature, the dignity and place of a disease. Closer study revealed the sign only of disease, the resultant effect of bad metabolism in a cachexia, or, from organic lesions, within itself an innocuous fluid filling the serous sacs or tissues, giving distress merely mechanical by its presence.

So we are now taught that the once thought bane of the gouty, the so-called "uric acid diathesis," and the various phenomena, including the gouty kidney, ascribed to uric acid, are really due to the toxic effects of the alloxuric bases: that uric acid is insoluble in the body fluids, and the irritation of the renal structures is through the asperities of its crystals, since as a chemical body it is innocuous. Horbaczewski has demonstrated that normally eliminated uric acid originates from nuclein, which in turn is liberated through the destruction of cellular structures, and especially of leucocytes.

Dunin and Nowaczek studied the question from another direction—*i.e.*, in five cases of pneumonia, in which disease leucocytosis is very marked. They found that the quantity of uric

acid eliminated rises greatly the day before the crisis—*i.e.*, when absorption of the exudation and destruction of the leucocytes begin. Immediately after the crisis the uric acid ratio rose to three times that of the precritical period, and continued high for several days. It seems plain, therefore, that uric acid originates from nucleins, which in turn are decomposition products of the cells of the organism, and particularly of leucocytes.[1]

This analogous study has been dwelt upon and will be recalled to elucidate, in a measure, the research necessary, should the conclusion of the writer, reached from observation of the hemoglobinuric habit of malaria, prevail. The cloud of dense ignorance which hung over the principles of surgery was dispelled through Lister's laboratory; and the coming of such men as Gerster, the authority unique, in this country, in asepsis and antisepsis, has elevated the art empirically practiced to the great liberal scientific branch of the profession. Through present endeavor on the profession's part, and the governments vying one with another to see which can the quicker and the more effectually wipe out infectious diseases, it is confidently looked forward to, at no distant day, when the principles and practice of medicine shall have been touched with the inspiration of multiplied vision, through stronger magnifying lenses, chemical revelation, physiological and pathological, and no longer will unsolved problems obstruct the pathway to progress, happiness, and health. The decrease in the prevalence and intensity of malaria for the past fifty years has come, doubtless, from economic concern on the part of governments—municipal, State, and national.

The present governor of the city of Lagos, an English colony on the west coast of Africa, is interesting himself and the home government in the economic, prophylactic control of malaria in his province, upon the idea of furthering commercial prosperity. On the west coast of Africa malarial hemoglobinuria is very fatal. It is not to be reckoned on that memorials to the proper authorities would be ruthlessly ignored, especially when demonstrated that the conditions warrant public concern. Such we believe to be true regarding the regions in this country annually scourged by malarial hemoglobinuria. The government should and, we believe, would not be slow, at such times as needed, to send out to the infected districts pathologists and such other experts, with necessary equipments required in the furtherance of such measures as may speedily overcome the baneful effects upon the

[1]By Charles E. de M. Sajous, M.D. In January, 1902, number of "The Monthly Cyclopedia of Practical Medicine" especial reference is given.

health and prosperity of its citizens. The time required and the expense of equipment are insurmountable obstacles to the parish practitioner. Yet some are not discouraged. J. B. McElroy, a country doctor at Stovall, Miss., whose postoffice I cannot find on the map, plodding along with his microscope and culture tubes, has illumined the pages of the literature on malarial hemoglobinuria with some of the cleverest reports and the most rational treatment of this type of the disease that it has been the writer's good fortune to find.

The hemoglobinuric type of malarial fever is confined to very narrow bounds in its distribution over the globe. In the United States it is limited to a region in those Southern States bordering on the Atlantic Ocean and the Gulf of Mexico; closely confined to a belt marked by the vein of limestone rock running from Cape Hatteras across the Mississippi River into Texas, and localities south of this cretaceous formation, where underground currents of limestone water break out in bold springs and streams; Florida being the only State bordering on the sea from North Carolina to Texas not traversed by this vein of rock, though Florida is included in the territory saturated, in localities, with water seeped from this cretaceous formation of the Mesozoic period. This formation is not, in its entire length, sharply defined, nor does it run in a straight line, taking, in a measure, the form of a coast line, bulging down and cropping out where streams cross it. It sharply defines, in this section, the red clay lands, covered with oak and hickory growth, from the light, sandy soil on which stand the forests of the famous yellow pine, and grows a matting of wire-grass. The Oconee River, running south, crosses this bed of rock about the center of the county. Dublin, on the west bank of the river, is situated on the exterme south border of this rock ledge—an ideal location to study malaria!

These recorded observations have been made during a period of twenty-five years, including a territory seventy-five miles square, and would have been enhanced with data and clinical reports but for three successive fires that ultimately reached every file in the writer's office. While all the forms of malaria are not uncommon in every section of Laurens county, a map of this territory shows with precision the localities to which the hemoglobinuric type of estivo-autumnal fever is confined. It has never occurred in this county outside the colored area. Why restricted to particular bounds? The answer to this question is the burden of the writer's purpose. The colored area includes the territory overlying the cretaceous formation, where in most places the wells supplying drinking-water, though deep, ranging from thirty to

eighty or more feet, reach down into a red, rotten earth which requires curbing to prevent choking up of the spouts. The water is sufficiently cool, but unpalatable from the constant dirty sediment seen in the water, which settles in appreciable quantities on the bottom of watering vessels. This area on the east side of the river is high, plateau-like, and not very well drained, having numerous basins or ponds holding water most of the year. On the west side of the river, high, rolling with precipitous hills, well drained, there are few ponds, and generally better drinking-water; in contradistinction to other sections in the county, where the pine forest and the wire-grass prevail, wells not so deep, but sunk through a firm, mottled clay to, in most instances, spouts trickling through strata of sand.

These wells, except along the river flats, where surface water seeps in, furnish clear, clean, wholesome, freestone drinking-water. Our first impulse, when met with this problem a number of years ago, was that the intensity of malarial fever in Buckeye, the scourged district, should be ascribed to swampy moisture and the lack of the beneficence of the sun's rays under the heavy foliage of the forest. Turning my eyes to southwest Georgia, I saw there the same conditions in the bald wire-grass plains. The needle-shaped leaves of the pine and their distance from the ground make no shade. After Laveran's discovery of the malarial parasite in 1880, and later Plehn's impression that he had found a special parasite which produced this particular type of malaria, it was hoped that the solution of the problem was not far ahead. Further investigation failed to prove this. The parasite found in malarial hemoglobinuria is of the estivo-autumnal variety, deriving its name from the season of the year in which it occurs. A recent letter from Dr. William Sydney Thayer, of Baltimore, informs me that it is an accepted fact, beyond controversy, that the estivo-autumnal parasite is the only variety found in the hemoglobinuric type of fever; the tertian and quartan producing the intermittent types. The pernicious type of malaria, "congestive chills," is produced by the estivo-autumnal parasite. So, constantly meeting each season, over the entire territory which my work embraces, with the types of fever produced by the estivo-autumnal parasite, but seeing in no instance a case of malarial hemoglobinuria outside the limits referred to, I question the parasite being the sole cause of the intense symptoms and great mortality.

Since the excessive use of certain articles of food is charged with producing diatheses, through pathological metabolism, may not the constant use of bad drinking-water produce a diathesis

or condition added to which the estivo-autumnal parasite poison gives the results known as malarial hemoglobinuria? Up to five years ago the ideas as to the manner of infection in malaria were speculative. Since the positive knowledge of one method has come to light, this method has not only been embraced, but emphasized in such manner as to almost dispute the possibility of all others. That the mosquito does transmit the parasite which gives rise to malarial fever no physician in this enlightened day disputes, but it is to be feared that the tendency to lionize this insect, though his practice be nefarious, may cause other equally important features of malaria to be neglected. Though his notes of danger do not impress us as the heavy barytone voice in which the lion renders his, his bite is to be more dreaded. The achievement of all the artillery and musketry of all the powers pales into insignificance when we glance back at the record of the mosquito.

The parasite found in the hemoglobinuric type and the ordinary remittent or continued form of malarial fever has been thoroughly agreed upon as the same. It seems strange that the mosquito, when he starts out from Hightower creek, a small tributary to Bruton creek, in quest of his evening meal, if he goes west, leaves the estivo-autumnal parasite, which may produce either the plain remittent or the hemoglobinuric type of malarial fever; when he goes east he leaves in his victim the estivo-autumnal parasite which produces the remittent type of malarial fever, but never the hemoglobinuric type; when he goes out north from Bruton, to the west of Hightower, he leaves his parasite which may produce either type, but when he goes south of Bruton he never takes with him his hemoglobinuric attachment; when he goes out from Blackshear's Mill creek, east or west, he leaves his parasite to develop in his victim either type of the fever; when he goes out either east or west of the Oconee River, either type of malaria may develop from his trip. But very seldom does the hemoglobinuric type of malaria develop in Bailey's district, on the west side of the river; this section is better drained than Buckeye, and as a rule has better drinking-water. A fortnight or so before the autumnal equinox an east wind sets in and blows steadily for days, and sometimes for weeks, coming across the southern portion of Buckeye district and the river over Dublin. Some of these insects take a ride over to feed on the dwellers in Dublin. This wind and the mosquito bring us the aggravated type of remittent malarial fever—estivo-autumnal parasite—in some instances not fever, but malarial jaundice, yet never the hemoglobinuric type of malarial fever.

Why this discrimination on the part of this insect? The citi-

zens of Dublin do not object to the discrimination in their favor, but why the mosquito's prejudice against the people in Buckeye district? During my experience I have known or heard of but two cases of malarial hemoglobinuria in the city of Dublin—one a young farmer who removed from Buckeye district after losing his family and quite nearly his own life with this disease, on Blackshear's Mill creek, and a young lady on a visit, who lived on the Ocmulgee River, where this limestone vein of rock crosses it. This young lady had had this fever before. There is no malarial hemoglobinuria north of this line of cretaceous formation, which is not exceeding forty or fifty miles wide in the vicinity with which this paper deals more particularly. Along the north border of this formation there are beds of chalk and kaolin. It is the conception of the writer that in the destruction of the feldspar, through which comes kaolin, the seeping away of the alkaline bases which have found lodgment against the lower border of this formation, which is hard and flinty, in sections, as in Buckeye district, saturates the earth above, out of which comes the drinking-water; being a similar process to water poured on and seeping through ashes in a hopper, to extract the alkali, which trickles into a vessel underneath—an improvised plan adopted in this section during the war between the States to get alkali to make soap.

In this section the lower border or ledge, cropping out of the ground, forms a dam against invasion of the territory immuned from malarial hemoglobinuria. In other sections along its course, crevasses and divides through this formation permit the passage of the contaminated water until it finds its way to the surface, as in southwest Georgia and Florida. To the ingestion into the system, through this contaminated drinking-water, of substances which affect the physiological functions of the body fluids, external evidences point very strongly. Why not chemical physiology be thus converted into chemical pathology, as through articles of diet and beverages? We here return to the analogous study.

"The most interesting feature next in order, especially from the standpoint of practice, is the identification of the articles of food that are liable to enhance the production of alloxuric bases by contributing to the organism the nuclear elements from which they are derived."[1]

Again, as to some other features peculiar to Buckeye district

[1]By Charles E. de M. Sajous, M.D. In February, 1902, number of "The Monthly Cyclopedia of Practical Medicine" especial reference is given.

and the hemoglobinuric belt. One of the basins within a few hundred yards of where a patch of this limestone rock, filled with seashells, crops out of the ground was drained by General Blackshear more than fifty years ago for cultivation. It was found exceedingly fertile, but the gases emanating from the upturned soil produced such violent urticaria in both men and animals cultivating it that it had to be abandoned. Others have since tried it with the same results. A form of eczema is prevalent along this belt. I have met it from Texas—called there the Red River itch. I do not doubt that there are to be found one or more proprietary preparations for "tetter" in every drug store in this belt, from North Carolina to Texas. I have never seen a person with cancer or asthma have malarial hemoglobinuria. Whether these diseases have a tendency to immune I do not know. A child was brought to my office from Buckeye district with a form of cancer a year ago for operation. The growth reached enormous proportions in nine weeks from its first appearance. Inquiry into the history of the child's previous health elicited from the mother that it was "broken down" with malaria. The microscope revealed the estivo-autumnal parasite. Its condition being inoperable I gave antimalarial prescriptions. I have not heard of the child or its condition since.

Of the other forms and conditions of malaria which are not uncommon in all sections of the county, my work with life insurance companies has revealed some striking features. The family histories show that the greater number of heads of families, from the colonial settlers to the present time, who lived in the river flats, died, where the actual cause of death was given, before the age of expectancy with cachexias or lesions, the resultant effects of malaria; while a majority out on the ridges, midway between the streams, died of other cachexias after the age of expectancy. The men on the swamps died earlier than the females. These men on the swamps lived in not only more intensely malarial localities, but ate more of hot meats and drank heavier beverages. As to their beverages, I learned through a book of the discharge lists kept by the first pole boat ever run regularly on the Oconee River. The settlers on the hills were the less fortunate; they were not possessed with means to own river plantations and slaves, hence attended their flocks, and ate of the meat from their herds; habits simple. Their beverage was cider, with now and then a nip of applejack.

I will say in reference to the differential diagnosis between malarial remittent and typhoid fevers, to those engaged in the malarial sections who have not begun the use of the microscope,

that before I began its use in practice the dicrotic pulse was my "pillar of fire," which never failed in leading me to a correct diagnosis in typhoid fever. We all agree that the process of leucocytosis is an essential aid to the dynamics in most fevers which we, in danger, in no slight degree rely upon. But in typhoid, and especially in malarial fever, we do not have this prop, but a reduction even in white corpuscles. To those of us who use the microscope and make analyses of the body fluids, if we would surmount the obstacles in the way of successfully combating the unsolved problems in reference to these two diseases, we should have the chemist, the physiologist, and the pathologist to teach us more of *nitrogen*.

Dr. Albert Robin, of Paris, delivered a lecture January 7, in which he declared that all so far accomplished in the treatment of tuberculosis has been in vain, since both medical science and philanthropy have been misapplied. He maintains that sanatoria are, from the financial point of view, impracticable, and that therapeutically they are simply chimerical. He expressed the opinion that humanitarian philanthropy in regard to tuberculosis is on the wrong track in the United States and in France, and that a complete change of tactics should be made in the treatment of tuberculosis all over the world. Dr. Robin asserted that, when tuberculosis is once firmly established in the system, it is practically incurable. Of thirty-six tuberculous patients leaving the sanatoria, Dr. Robin found that ten had relapsed in six months, ten more in a year, and that five were eventually cured. The only efficacious method of fighting tuberculosis, according to Dr. Robin, is prevention. The predisposition to tuberculosis has recently been determined with mathematical accuracy by Drs. Robin and Binet by two tests—the excess of respiratory consumption, and the daily organic demineralization. Dr. Robin states that all efforts should be directed against this preliminary stage of tuberculosis, prevention of the disease being easily attained by open air, abstinence from alcohol, and complete mental and physical rest. A new ward has been opened in the Hôpital de la Pitie for the preventive treatment of tuberculosis under the direction of Dr. Robin. In view of these statements the raising of over $300,000 toward the establishment of tuberculosis sanatoria in France, founded upon the German model, by the Parisian newspaper *Le Figaro* has caused considerable comment.—*Philadelphia Medical Journal.*

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

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EDITORIAL ARTICLES.

THE TRIUMPHS OF THE REFRACTIONIST.

The post-mortem of the long dead and buried is never a completely satisfactory affair. It is easy to find a relation existing between the facts of Napoleon's life and the size of his heart. It might not be impossible to account for the curiosity of Pharaoh's daughter by finding her to have had normal feminine instincts. But now comes Dr. George M. Gould, in a series of biographical clinics, who tells us that several latter-day worthies who are now unhappily dead could have lived happy and contented lives had they not suffered from ocular reflexes—all their troubles might have been adjusted had they only had the good fortune to fall into the hands of a skilful refractionist.

So Thomas De Quincey is found early to have had "an alarming illness threatening his head;" at sixteen "he is weary, torpid, and languid." Later he had twitching in the region of the stomach, then irritation of the stomach, and ingestion of 340 grains of opium a day. In 1850, when he was sixty-five years of age, he says "my eyes are better;" nine years later he is doubtful whether he has some defect of his eyes, or whether the lights that he can command are bad. From facts such as these, and from the consideration of a cross-eyed picture of De Quincey, it is significantly suggested that "the trained oculist would not need direct evidence of ametropia to convince him of the subtle source of De Quincey's affection." He had also exophoria, amblyopia, and some ptosis. His opium habit was the result of all this reflex disturbance. It is all as clear as day. We cannot help thinking he might also have had some hemorrhoids, and that the twitching of his stomach might have been due to these as much as to want of spectacles; but the refractionist must have his day.

So also Carlyle, who said: "I shall never be other than ill,

wearied, sick-hearted, etc. . . .bilious, heartless, and forlorn." All his melancholy, his misanthropy, his acidity of temperament, his rancor of soul, his asphyxiation of the spirit, were due to a simple error of refraction, that might have been adjusted by an itinerant optician. Why did not an angel from heaven tell Mrs. Carlyle about this, and so save her some of the ills she naturally attributed to her own lack of culinary skill?

Darwin, too, and Huxley, men who might in the ordinary course of their avocations have learned something about physiological optics, suffered all kinds of fatigue symptoms and reflex neuroses, all because they did not pursue the study of muscæ volitantes with the same assiduity as they studied the earthworm and the bathybius.

Then comes Browning; he also had ametropia. His vision was often obscured, which doubtless accounts for the occasional lack of lucidity in his poetry. He would have written "Sordello" so that it could have been understood by Paul Kruger or any one else had he only had his ocular insufficiencies adjusted.

The biographical method of holding ophthalmological clinics is undoubtedly one that may be pursued with advantage, and will be imitated in other specialties. It is impossible to deny the universality of the method employed, and in the hands of the versatile it will be found capable of accounting for much, for to an error of refraction or something else can be attributed the mental perversity of the children of Israel or the erotic extravagances of the Olympian deities.

EDITORIAL NOTES.

The Late Lennox Browne, F.R.C.S.E.

By the recent death of Mr. Lennox Browne the English-speaking laryngological world has lost one of its most distinguished members. From 1865 to 1873 he was associated with Sir Morell MacKenzie as assistant, and during that period furnished the illustrations for that master's works. He had received an artistic training, and his skill with pencil and brush added greatly to his later success. His own work, "The Throat and Nose and Their Diseases," ran through five editions, the first of which was published when its author was but thirty-five years of age. Mr. Lennox Browne was a man of great popularity, but like most men of strong character he made enemies, and his impetuous and impulsive disposition led him at times into difficulties

which a cooler and more circumspect nature might have avoided. He was the founder of the Central London Throat and Ear Hospital, and always supported its interests with zeal and enthusiasm. He was also one of the founders of the British Laryngological Association, and always an active factor in the work of that society, occupying almost from first to last some one of the official positions connected with it. In the annals of British laryngological affairs his name and memory will hold place with those of Sir Morell MacKenzie and McNeil Whistler.

Laziness Caused by a Germ.

At the meeting of the Sanitary Conference of American Republics, recently held in Washington, Dr. Chas. W. Stiles read a paper in which he advocated the theory that laziness was caused by a germ. Stiles maintained that this disease—uncinariasis—is very prevalent in the Southern States, where it is often mistaken for malaria. This disease, according to the speaker, creates an abnormal appetite for different things in individual cases, and the "dirt eaters" of the South are almost all sufferers from it. The disease itself, asserted Stiles, was not due to dirt eating, but reversely the habit was due to the disease. If the theory set forth by Dr. Stiles be true it is doubtless owing to it that the South has fallen so behind in the general progress of the nation, although laziness is not by any means confined to that part of the country which exists below Mason and Dixon's line.

The Sleeping Sickness in Africa.

Recent reports sent to England from Uganda show that the "sleeping sickness," which up to the present time had been so rarely seen that it was considered more of a medical curiosity than anything else, has become epidemic among the natives. Already it has caused the death of about 75,000 natives in Uganda, and as shown by the reports many thousands are at present afflicted with it. The disease is nearly always fatal in its termination. It is considered by English physicians who have made a study of it to be bacterial in origin, and to be practically a form of meningitis. As yet the germ of the disease remains unidentified, but it is to be hoped that strenuous efforts will be put forth toward finding it so that suitable means may be taken to protect the natives from this strange and fatal malady.

ITEMS AND NOTES.

LORD STRATHCONA will contribute $20,000 toward the erection of a new gymnasium for the McGill University, Montreal.

STATISTICS for 1902 demonstrate that Vienna still stands foremost among European capitals in the number of suicides.

DURING 1902 the death-rate for the city of New York, 18.74 per thousand, is considerably the lowest ever reported in that city.

THE recent epidemic of plague in Manila which lasted from December 26, 1899, to March 6, 1902, caused 745 cases of the disease.

THE authorities of Paris propose to erect a hospital for lepers in that city, and an appropriation of 25,000 francs has been asked for this purpose.

IT is announced that Malcolm Morris, who has retired from the editorship of the *Practitioner* after eight years' incumbency, will be succeeded by W. Cecil Bosanquet.

A NEW fellowship in medicine of the annual value of $1200, tenable for two years, called the Proudfit Fellowship, has been established at Columbia University for research work and advanced study in internal medicine.

THE Manila Medical Society has been organized in Manila, P. I., along the lines proposed for local organization by the American Medical Association, and has made formal application for recognition as an affiliated body.

THE national convention of delegates from the various State boards of health, called to consider the dangers threatened by the possible introduction of the bubonic plague into the United States, was held at Washington, D. C., January 19.

A REPORT has been received at the State Department at Washington that a small lake fifteen miles from Ujoora, Russia, has been found to contain water possessing great curative properties, especially efficacious in the treatment of rheumatism, and catarrhal, skin, and nervous diseases.

THE Suez Canal Company asked to have Dr. Ross sent out to suggest measures to combat malaria at Suez. The local physicians had been studying the cause why mosquitoes were so prevalent in

that arid country, although there seems to be no stagnant water for them to hatch in. They found that although the surface is dry, yet there is moisture close to the surface in many places, forming concealed marshes, revealed only by occasional tufts of grass. They found the Anopheles at these points, and Ross has already instituted measures for their destruction on the lines that have been so successful in Western Africa.—*Journal of the American Medical Association.*

It is announced by the *New York Medical Journal* that Henry Phipps, of New York, once a partner of Andrew Carnegie, will establish in Philadelphia an institute for the study, treatment, and prevention of tuberculosis, and will endow it with $1,000,000 or more. It will be named the Henry Phipps Institute, and will be located in the center of the city among the poor, if a suitable site can be obtained, where it will be easily accessible, and where the best scientific talent can be obtained for the various positions in the institute. Dr. Lawrence Flick, of Philadelphia, will be the director. The institute will be an entirely independent charity. The buildings will cost probably between $200,000 and $300,000, and the endowment will be $1,000,000 or more to yield an income of about $40,000 a year for the institute's maintenance.

The only Chinese hospital with Chinese doctors, Chinese medicine, Chinese nurses, and Chinese patients, is situated on the border of Chinatown, San Francisco. It is, according to the *Philadelphia Medical Journal,* a large new two-story building, and has but recently been erected. Up to this time a Chinese, unless afflicted with leprosy, in which case he was sent to the pesthouse, was not admitted to the public hospitals. Rich Chinese merchants subscribed $30,000, the income of which supports the present Chinese hospital. There is a daily clinic held in the hospital, with a resident white physician and surgeon; there is also a Chinese department with a Chinese doctor. Patients entering are told to choose European treatment. As many as 400 cases are treated in a month, with only fifteen deaths. The hospital contains forty beds.

The New Orleans meeting of the American Medical Association will take place May 5 to 8. The Southern Railway has announced a reduced rate of one fare for the round trip from Washington, or from any point on their system, to New Orleans and return. Tickets will be on sale May 1 to 4, and will be good for continuous passage in each direction, with a final limit of ten

days from the date of sale. Tickets can be extended for a longer period, however, provided they are deposited in person, by the original purchaser, with the special agent at New Orleans not later than May 12, 1903, and fee of 50 cents is paid at the time of deposit, when the final limit will be extended to a date not later than May 30. Further information may be obtained from the chairman of the committee on transportation, Dr. H. L. E. Johnson, Jefferson Place, Washington, D. C.

The Supreme Court of Georgia has handed down a decision which the advocates of Christian science regard as a victory for them. The decision holds, according to the *Medical Review,* that parents are not compelled to give medicine to their minor children when they become ill, and that failure or refusal to give medicine to these children is not a violation of the laws of the State. A Christian scientist named Justice refused to give medicine to one of his children when it became ill and refused to allow a physician to attend the child. After an illness of several days the child died. The neighbors of Justice swore out a warrant for him charging him with failure to provide the necessary sustenance to the child, a crime under the laws of the State of Georgia. This was the only charge upon which they could prosecute. The case was tried in the City Court of Dublin, where the man lived, and he was fined $300. He appealed the case from one court to another until it reached the Supreme Court, which reversed the decision of the lower courts.

Dr. H. P. Bowditch, of the Harvard Medical School, lectured upon the "Use and Abuse of Alcohol" January 9 in Boston (*Philadelphia Medical Journal,* Jan. 17, 1902). He classed alcohol as a relish, since it stimulated the nervous system and thus aided digestion. It may sometimes be a food and sometimes a poison. Its properties are little understood by those who use it to excess. While alcohol liberates energy, a man who has taken enough to become intoxicated could have secured as much proteid from a quarter of a pound of bread at much less expense. As large amounts of alcohol cause flushing of the skin, it cools off the body heat. It is, therefore, used to lower the temperature, and the man who drinks it before going out sleighing does not understand its properties. When taken in even larger quantities it affects the brain, causing a man to lose control of his thoughts and emotions. If still more is taken, inability to control the muscles is followed by coma. In health, alcohol is not a valuable food, but it may be of great use in convalescence from disease.

NEW PUBLICATIONS.

GENERAL SURGERY.

The year-books in the Practical Medicine Series have been added to by the recent contribution of Dr. Murphy on General Surgery. He reviews much of that in which modern progress consists. He insists that procrastination is still the cause of greatest mortality in surgical diseases. He insists also that recent experience in field surgery has demonstrated the inutility of nearly all manipulation, handling, washing, probing, and sponging the wounds inflicted in bones and tissues by bullets. Dr. Murphy's volume is an interesting contribution to surgical opinion.

The Practical Medicine Series of Year-books. General Surgery, Edited by John B. Murphy, M.D. Chicago: The Year-book Publishers, 1902.

BIOGRAPHICAL CLINICS.

The versatile and prolific pen of Dr. George M. Gould has found occupation in a study of the causes of ill health in De Quincey, Carlyle, Darwin, Huxley, and Browning. The author finds all these notable and distinguished people to have suffered from ocular insufficiencies, and he believes this to have been the fundamental fact underlying their impaired health. There is much that strikes the reader as being true in Dr. Gould's arguments, and despite the fact that his biographical clinics are clinics founded on imperfect biographical data, they form a suggestive piece of special pleading for the refractionist, which will both amuse and edify.

Biographical Clinics. The Origin of the Ill Health of De Quincey, Carlyle, Darwin, Huxley, and Browning. By George M. Gould. Price, $1.00. Philadelphia: P. Blakiston's Son & Co., 1903.

PHYSICIAN'S LEDGER.

Attention should be given the admirable ledger for the use of physicians, constituting what is termed the Physician's Protective Accountant. The scheme is simple and effective, and will aid physicians in this important branch of their work.

Ledger of Monthly Balances and Index of Accounts to be Used in Connection with the Physician's Protective Accountant. Chicago: The Clinic Publishing Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgical Shock.

George W. Crile recently read a paper before the Chicago Pathological Society on surgical shock (*New York Medical News,* Nov. 29, 1902). He said that surgical shock is an exhaustion of the vasomotor center. Neither the heart muscle nor the cardio-accelerator center is other than secondarily involved. Therapeutic doses of strychnine are inert, physiological dangerous or fatal. If not fatal, it is followed by exhaustion. There is no practical distinction to be made between external stimulation of this center, as in injuries and operations, and internal stimulation as by strychnine. Each in sufficient amount produces shock, and each, with equal logic, might be used to treat the shock produced by the other. The blood does not tolerate much dilution with saline solution; its volume can be increased but little by saline infusion. Elimination takes place through the channels of absorption. It accumulates in the splanchnic area, and if in sufficient amount the diaphragm and the ribs become fixed, and death is caused by respiratory failure. Saline solution has a strictly limited field of usefulness. Adrenalin acts upon the periphery, and will raise the blood-pressure in normal animals in every degree of shock: with the medulla cocainized, or in the decapitated animal. It is rapidly oxidized by the solid tissue and by the blood. Its effect is fleeting; it must therefore be given continuously. By this means the circulation of a decapitated animal was maintained ten and a half hours. The pneumatic suit provides an artificial peripheral resistance, and gives an absolute control over the blood-pressure within a range of 25 to 40 millimeters mercury.

Intestinal Obstruction.

A. Bowlby (*British Medical Journal,* Jan. 30, 1903) says that in doubtful cases, when it is decided to open the abdomen for the supposed mechanical obstruction, it is best to make the incision in the middle line below the umbilicus, because most of the causes of the obstruction will be found in the lower half of the abdomen.

Without allowing any intestine to escape, examine first with two or more fingers, or even the whole hand, the right iliac region,

and pass from there toward the umbilicus to feel whether there are any adhesions there. It is in this right lower half of the abdomen that most of the causes of obstruction are to be found, for here are (1) the appendix; (2) intestinal diverticula, perhaps attached to the umbilicus or to the neighboring mesentery; (3) the commonest site for volvulus—that is, the cæcum; (4) the usual site for the lodgment of an impacted gall-stone—that is, the lower part of the ileum; (5) a common place for adhesions due to caseous mesenteric glands; (6) the sites of inguinal, femoral, and obturator hernia. Further, if the obstruction be in the small intestine it is in the right iliac fossa that undistended intestine will be found, and if this can be secured and traced upward it is the surest guide to the seat of obstruction.

Examine next the left iliac region and the pelvic region, the latter especially if the patient be a woman, for there, as additional causes of adhesions, may be inflamed ovaries or tubes or some uterine trouble with the neighboring inflammation.

If no cause can be discovered, then either open a coil of distended intestine and suture it to the skin, if the patient be too ill to bear more, or else decide to take the distended bowel out of the abdomen altogether, and if necessary open it. It is only by so doing that you will be able to return it once you have decided to let it escape, and it is often only by so doing that you will find a deeply seated obstruction.

The Malignancy of Joint Tuberculosis.

C. F. Painter (*Boston Medical and Surgical Journal,* Jan. 8, 1903) says that tuberculous disease tends to recur after apparent cure in a considerable proportion of cases. This recurrence is most commonly a local one. Metastases are not common; trauma, direct or indirect, is frequently associated with recurrence; persons who have suffered from bone and joint tuberculosis should be cautioned that they are not well when symptoms have ceased, and that reasonable care must be exercised to avoid recrudescence; deformity and shortening should be corrected as far and as accurately as possible to lessen the chances of recrudescence; mechanical treatment, especially fixation, should be used in the acute conditions of childhood. Exploratory interference, when discretion is used, with a view to removal of isolated foci, is advisable in many cases in children, and is to be urged in the majority of the recrudescences, if seen early. The author insists that patients with hip disease, Pott's disease, and tumor albus

have tuberculosis, and must be treated as much as if they had phthisis.

A New Protective Bandage.

Dr. Springer (*Centralbl. f. Chir.*, No. 24, 1902) recommends the use of a protective bandage of paraffin having a melting point of 45° C. A piece of paraffin is put in boiling water and allowed to boil for twenty minutes; the vessel is then rapidly cooled, causing the water to be covered with a thin sheet of paraffin. At the temperature of the operating-room the paraffin remains soft and pliable enough so it can be bent and cut as required. While the paraffin is still floating on the water it is perforated with a hot needle so as to allow the free discharge of secretions. It is then taken up with a pair of forceps and placed over the wound, water side down. Its advantages are that it is cheap, does not adhere to the wound, does not irritate, and is certain to be sterile.

MEDICINE.

Virus of Smallpox.

Ishigami (*Sei-i-Kwai Med. Jour.*, Tokyo), in a long paper on the cultivation of the virus of variola, comes to the following conclusions: (1) None of the bacteria found in the variola lymph, variola scabs, humanized vaccine lymph, vaccine lymph, and the swollen lymphatic glands of vaccinated animals, can be considered as the characteristic element of the vaccine virus. (2) Protozoa are always to be found in the epithelial cells of the dissected preparation of vaccine vesicle, and in variola lymph, its scabs, humanized vaccine lymph, vaccine lymph, and in the scabs of vaccinia. They are also present in the blood and viscera of the vaccinated calf at the maturation period. (3) They are green, shining, round or elliptical unicellular bodies with a nucleus. They are ameboid when young, but become quiescent after they invade the epithelial cells, when they still continue to grow. (4) Multiplication of these protozoa takes place in two ways. They divide directly in two, or they form cysts whose contents divide up into many sporozoites. (5) There are two modes of cyst formation: (*a*) The cysts which are found in the cells are comparatively large and are for the propagation of species (the propagative Fortpflanzung of Doflein); (*b*) the cysts which are found within the inoculated incisions are com-

plete in twenty-four to forty-eight hours, and are smaller. They are preparatory for the invasion of many epithelial cells in a short time (the multiplicative Fortpflanzung of Doflein). (6) These sporozoa can be cultured in a special artificial medium made with epithelial cells of a non-vaccinated animal. (7) By inoculating this artificial culture into a calf we get vaccine vesicles, accompanied with fever in three or four days or later. These vesicles resemble in all respects those produced by inoculating with ordinary vaccine lymph, and contain the same protozoa. The calf inoculated with this artificial culture is immune to the vaccine virus. By inoculating other calves with the lymph from the vesicle formed by this culture, regular vaccine vesicles are got, and the animals rendered immune against variola. (8) The originators of variola and vaccine are identical, for the following reasons: (*a*) The characters of the sporozoa in the lymph and its scabs are the same in both conditions; (*b*) inoculation by the lymph or scabs of either condition produces the same result, except that the swelling is greater in variola than in vaccinia; (*c*) inoculation of the calf with either disease gives protection from the other disease.

Pathological Aspects of Recent Work upon the Pancreas.

E. H. Starling and W. M. Bayliss (*British Medical Journal,* Dec. 20, 1902), at a recent meeting of the Pathological Society of London, read a communication on the above subject, referring first to the physiological side of the question and citing the early experiment of Claude Bernard, in which pancreatic flow was alleged to have been induced by the injection of ether into the stomach. The presence of food in the stomach, or of ether, however, produced no pancreatic flow unless a passage occurred in the intestine from the stomach. The high interest attaching to the matter was that the flow was not due to any nervous reflex, but was chemical, and was set going by passage of the acid chyme along the intestine. Acid introduced into the duodenum or jejunum evoked the flow from the pancreas; but no result ensued from the lower part of the ileum. In the cells of the intestine a "secretin" was produced which, being conveyed by the blood to the pancreas, stimulated the gland. The pancreatic secretion could be unerringly stimulated by the injection of this secretin obtained from an acid decoction of the mucosa of every known vertebrate. The amount of tryptic ferment in the secretion was largely increased, moreover, by the use of washings of scrapings

from the intestine—a trypsinogen was converted into trypsin by a substance in the succus entericus. The acid chyme was neutralized by the pancreatic juice, and the pylorus would not open as long as the contents of the duodenum were acid. If the secretion was injected into a dog the pancreas was stimulated, although no acid chyme was present in the duodenum; intense hyperemia of the intestinal mucosa resulted. The clinical condition of acute pancreatitis was possibly due to the passage of succus entericus to the pancreatic ducts. In the human subject diabetes was not affected by the therapeutic injection of secretin; the pancreas was not stimulated to an increase of its diminished function.

Beriberi.

At a meeting of the Norwegian Scientific and Literary Society held at Christiania, Professor Uchermann (*Lancet,* Dec. 29, 1902) gave an account of the results of the investigations of the committee appointed for the consideration of beriberi, and showed that the problem had been solved as far as possible until the poison itself was determined. The main conclusions he arrived at were: (1) that beriberi is an infectious disease due to a specific microbe; (2) that it is a constitutional disease, the tendency to which is brought about by inadequate physiologically insufficient food, especially the want of azote (albuminates) and fat; and (3) that it is due to an intoxication introduced through the food. The committee advised that certain regulations should be enforced in the victualling of ships in order to prevent the occurrence of beriberi. Amongst these are the following: The use of tinned foods should be restricted; potatoes and fresh vegetables should be provided in as large quantities as possible; on long voyages the quantity of sugar and dried fruits should be increased; fat should be made a component part in the scale of diet in warm climates; and on long voyages the use of a filter (Chamberland-Pasteur) should be enjoined.

The Gas Evolved in the Decomposition of Hydrogen Dioxide by Pus.

J. Marshall (*University of Pennsylvania Medical Bulletin*) says that it seemed that possibly the bactericidal action of hydrogen dioxide might be due to its penetrating the cell membrane of the bacterium, and coming in contact with some body contained in the bacterium which possessed the property of decomposing

hydrogen dioxide, liberated the gas which, by its physical action, ruptured the membrane, thus destroying the vitality of the bacterium; but experiments made with the bacillus megatherium, bacillus anthracis, and the yeast cell did not appear to substantiate the thought. Von Bruns, in recommending the use of hydrogen dioxide in the treatment of infected wounds, attributes its action as being partly physical and partly chemical. It certainly has a physical action in mechanically loosening and disintegrating necrotic matter, and probably also a chemical action, due to the liberation of oxygen in the nascent state, in the production from noxious substances of new compounds which may be innocuous in character. Use is made of its physical action, as first suggested by Crile (Browning), in mechanically removing the particles of carbon in gunpowder burns, which, after the healing of the wound, gave a bluish-black appearance to the skin. It might also be found useful in removing the particles of coal which produce the bluish-black stains in the wounds of workers of coal. It is unlikely that absorption into the circulation of a quantity of the solution sufficient to produce gas emboli occurs when it is employed in the treatment of wounds and cavities, provided openings exist for the free escape of the gas, so that no pressure is exerted on the liquid.

The Pathology of Pernicious Anemia, with Special Reference to Changes Occurring in the Hemolymph Nodes.

A careful analysis of the lymph glands in eight cases of pernicious anemia is given by A. Warthin (*American Journal of Medical Sciences,* October, 1902). He concludes his paper as follows:

Pernicious anemia is essentially a hemolytic disease due to some unknown poison which stimulates the phagocytes of the spleen, lymph and hemolymph glands, and bone-marrow to increased hemolysis. It is not improbable that the destruction of hemoglobin causes poisonous products which give rise to a vicious circle; that the hemolysis is not confined to the portal circulation, but involves the prevertebral lymph and hemolymph nodes and bone-marrow, and in the majority of cases the spleen is the chief seat. In most instances, when an iron reaction is found at the seat of actual hemolysis, the varying pathological conditions can be explained by supposing that it is cyclical or intermittent. The changes in the bone-marrow do not form an essential part of the pathology.

Eleven Acute and Eighteen Chronic Cases of Influenza Proved by Bacteriological Examinations.

T. T. Lord (*Boston Medical and Surgical Journal,* Dec. 18, 1902) says that the infection with influenza bacilli is prevalent apart from an epidemic of influenza.

Influenza bacilli have been found in the sputum of 60 of 100 selected patients with cough. In about one-half of these 60 the influenza bacilli were in practically pure culture. There is nothing distinctive in the clinical manifestations of influenza apart from epidemics, and the diagnosis can with certainty be made only by the examination of the sputum for influenza bacilli. The duration of the cough and expectoration after the attack of acute influenza does not usually exceed six weeks, but in some cases it lasts for months or years. Many of the cases formerly classed as chronic bronchitis are chronic influenza. Cases of chronic influenza with paroxysmal dyspnea may closely resemble asthma; chronic influenza is not infrequently mistaken for pulmonary tuberculosis.

Pathology of Fibrinous Bronchitis.

H. Hochhaus (*Archiv klin. Med.,* Bd. lxxiv) carefully examined a case both clinically and anatomically. Similar to some other authors, he found that the profuse expectoration from the smaller bronchi did not consist of fibrin but of mucus. The source of these casts was found to be in the dilated bronchi of one of the upper lobes; the lung tissue here, owing to the chronic inflammation, was changed to an indurated mass. The walls of the smaller bronchi were in a state of severe inflammation, though the epithelium was intact. Clinically there is no sharply defined line between those cases in which we find mucous casts and those in which fibrinous casts may be demonstrated; also the presence or absence of Charcot-Leyden crystals and spirilla seems to make no material difference. He agrees with other authors that in fibrinous bronchitis, bronchial asthma, and bronchiolitis obliterans the characteristic lesion is an intense inflammation of the fine bronchi.

The Bath as an Infecting Medium.

Dr. Winternitz (*Therap. Monatshefte,* September, 1902), contrary to the opinion of Sticher, Stroganoff, Kustner, and others, who believe they have experimentally shown that pregnant women are infected by means of the bath, comes to the con-

clusion that this is not so. He added to the bathing water eosin and other stains which could easily be demonstrated in the vagina had the water entered it, and thus showed that it did not do so. Nevertheless, he advises that the bath tubs of pregnant women should be well cleansed, disinfected, and the water used but once; also that before the bath the external genitals should also be cleansed and disinfected, especially before a digital examination. With these precautions he considers that the bath cannot be regarded as an infecting medium.

THERAPEUTICS.

Permanent Effects of the Sanatorium Treatment of Phthisis Among Members of the Working Classes.

In this paper Reiche (*Edinburgh Medical Journal,* December, 1902) attempts to find out the permanent results obtained by undergoing sanatorium treatment. In Germany insurance against sickness is compulsory, and the insurance companies find it more profitable to pay for the cure of early cases of phthisis than to continue paying the claims for sickness. Reiche is the examining physician for the Land Insuring Company of the Hanseatic towns. Up to the end of 1901 he had examined for it 2273 patients. Of these 1571 underwent cures of over four weeks. The after-histories of these cases are known, as the insurance companies keep in touch with the individual members, and periodical inspections are made. At the inspection made at the end of 1901 of the fifty-six cases treated in 1895, fifteen had since died, not necessarily of tubercle. Of the remainder, twenty-nine (= 56.7 per cent) were well and able to do hard work, and eight were totally unfit for work. In 1896, 140 cases were treated. Of these, twenty-four have since died, while ninety-one are fully able and six totally unable to work. In 1899 the figures are 204 cases, with twenty-nine deaths since—138 fully able, twenty-three partially able, and fourteen totally unable to work. Altogether during the years 1895 to 1900, of 1238 cases treated, 13.1 per cent have since died, while 62.1 per cent are able for full work, 16.3 per cent are able for limited work, and 8.5 per cent are totally unable to work. Reiche thinks there is no doubt that they were all genuine cases of phthisis. These cases are not specially selected as early cases likely to profit by the treatment. On the other hand, even before the cure, a considerable number of the cases were still able to work, so that it cannot be claimed

that treatment rescued them from total inability to earn a livelihood; but in most cases this calamity was imminent.

The results obtained by the treatment were economic restitution rather than absolute medical cure. In fact, in only 118 of the cases had all the objective lung symptoms disappeared at the end of the cure, and of these 60 per cent developed new symptoms in the course of time. From the analysis of 315 cases not subjected to sanatorium treatment, Reiche comes to the conclusion that the average course of fatal phthisis lasts forty-three months. How useful the sanatorium treatment is, is shown by the fact that 53 per cent of the cases treated in 1895 are still able to do full work. In the latter part of this paper Reiche points out that a true clinical cure is very rare, but emphasizes the excellent economic results obtained by the sanatorium treatment, which in many cases causes the tuberculous processes to become quiescent.

Heroin and the Results of its Abuse as a Drug.

Since its success in respiratory affections during the last few years, heroin has run the risk of being abused by patients, as morphine has been previously abused. J. L. de la Jarrige (*Thèse de Paris,* 1902; *British Medical Journal,* Dec. 20, 1902) contributes a number of interesting observations on this point. Heroin is the diacetic ether of morphine, and while less powerful as a hypnotic than morphine, it has a specially sedative effect on the respiratory passages, and slows and deepens the respirations. Having found it beneficial in asthma, spasmodic cough, bronchitis, etc., patients have become addicted to it when its use was no longer indicated, largely owing to its euphoric effect. Among the several cases, male and female, recorded by the author the following is typical and of interest:

The patient was a woman, aged forty-six years, of intelligent character, a sufferer for years from restlessness, insomnia, fleeting bodily pains, and vague distress. After various drugs had been tried without success heroin was given in July, 1900, with benefit hypodermically, there being a total cessation of pain and restlessness, while refreshing sleep was secured. To continue this treatment she entered a sanatorium, and underwent nightly injections (6 milligrammes of heroin per dose) hypodermically for two months. Sleep followed fifteen minutes after the dose. She left the sanatorium cured of her ailments, but became a slave of the drug, which she continued to abuse until it gave rise to toxic symptoms (delirium with pains and cramps) and produced a state

of general nervous agitation. Under medical treatment the heroin was very brusquely discontinued, and for a fortnight afterward she suffered much agony and painful insomnia. She had also been suffering from severe constipation owing to the abuse of the drug. All these untoward symptoms, however, passed away after withdrawal of the drug, and the patient was at length regarded as cured.

The Serum Treatment in Acute and Chronic Articular Rheumatism.

Menzer (*Zeitschrift für klin. Medicin,* 47 Band, 1 and 2 Heft) inoculated large animals with pure cultures of streptococci which he obtained from the tonsils of patients suffering from acute articular rheumatism, and then used their immune blood serum for the treatment of similar cases. In chronic rheumatism the serum causes a reaction only in the joints affected, which is often followed by improvement and cure. In acute rheumatism cases treated with the serum show fever of on an average from six to nine days' duration, the joint symptoms lasting from six to seven days; relapses were not noticed. Although at the onset severe cardiac symptoms were threatened, they did not develop. In cases of chronic and nodular rheumatism a decided and beneficial effect was apparent in the affected joints, due to the action of the serum, which at first produced an acute inflammation. In other streptococcic inflammation, such as pneumonia, mixed tuberculosis, postscarlatinal nephritis with streptococci in the urine, the serum showed some beneficial action and at least did not aggravate the case. The comites were hyperidrosis with the reduction of fever, during the fever headaches, sore throat, and an exanthematous rash. The serum treatment does not owe its effect to its direct action on the disease, but rather to its strengthening of the recuperative powers, enabling them to overcome the process. As a daily dosage the author advises the injection of 5 to 10 cubic centimeters; on the whole 50 to 75 cubic centimeters of serum is sufficient in acute cases.

Ichthyol in Diseases of the Genital Mucosa.

Goldmann (*British Gynecological Journal,* November, 1902) strongly advocates the use of ten-per-cent mixture of ichthyol in vasogen in many gynecological diseases, in colpitis, whether due to gonorrhea or the misuse of pessaries, or secondary to uterine disease; in endometritis, leucorrhea, or erosions of the portio. In

chronic parametritis and chronic perimetritis, when all signs of acute inflammation have passed away, its resorptive and analgesic effects have proved excellent, and it is also a good hemostatic in the serious hemorrhages which almost invariably occur in these affections. He refers to articles already published by Breitenfeld and v. Oswiecimski confirming the beneficial action of this drug in some forms of dysmenorrhea, and promises a further account of its use in inflammatory and hysterical cases. He affirms that ichthyol is better and more completely dissolved in vasogen than in glycerin, and therefore better and more quickly absorbed. The ten-per-cent ichthyol vasogen does not cause the sensation of burning and itching to which glycerin gives rise by its affinity for water. He employs tampons impregnated with ichthyol vasogen, which are generally left *in situ* for twelve hours, with warm irrigations, perfect cleanliness, and, in some cases of chronic disease, inunction or compresses of the same mixture, and all other therapeutical measures indicated by the symptoms.

Ten-per-cent ichthyol vasogen has been extensively used, and found its place in skin diseases. The disinfecting action of the ichthyol is especially valuable in all cases of disease of the genital mucosa accompanied by profuse and foul discharge. It seems, however, probable that the affinity of glycerin for water may have a special therapeutic effect of its own that for certain cases (exudations, etc.) makes it a better vehicle than vasogen.

Ichthyol Ointment in Pneumonia of Children.

Dr. Franke has had good results from the use of ten-per-cent ichthyol ointment, spreading it in the breadth of two hands over the back of the patient, and applying over the dressing two or three times daily a wet pack for one to one and a half hours. He reports that in forty-eight hours the restlessness disappears, the temperature sinks considerably, the cough is painless and loose, and the appetite improves.—*Therap. der Gegenw.*, 1902, No. 8.

Experimental Examinations of Urinary Antiseptics.

Sachs (*Wiener klin. Wochenschrift,* 1902, No. 17) found that the internal administration of antiseptics which are eliminated by the kidneys gives the urine the power of retarding the growth and destroying bacteria. He made his experiments with cystitic patients, also with normal urine of patients who had taken antiseptics to which typhoid and staphylococcus cultures had been added. The results showed that urotropin (4 grammes

pro die) made the urine antiseptic to the bacteria present in the urine, also destroying the cultures added to it. Urotropin showed itself to be the most powerful antiseptic. Next in rotation are salicylic acid, oil of santal, methylene blue, salol, balsam copaiva, acidum camphoricum, and oil of turpentine. Potassium chloride, boracic acid, and uva-ursi showed no noticeable action.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

A Case of Epilepsy of Nasal Origin.

This case, reported by D. P. Van Eeckhant (*Rev. Hebd. de Laryngol.,* Dec. 13, 1902), presents some interesting features. The author mentions two cases reported by other observers where an anomaly of the septum was apparently the exciting cause of epileptoid seizures which promptly subsided after suitable surgical interference. Van Eeckhant's case was as follows:

A man aged forty-one, a cigarmaker, gave a history of cephalalgia and vertigo extending over several years, and more recently full epileptic seizures with loss of consciousness. These attacks had been increasing in frequency, and the patient was incapacitated for any kind of labor. The bromides and phenacetine exerted no apparent influence on the seizures. Rhinoscopic examination showed an osseous spur in the left nasal fossa extending across from the septum to the inferior turbinate. Under cocaine anesthesia the entire bony outgrowth was removed with the Bosworth saw.

Following the operation there was absolute cessation of the seizures, and recovery has been apparently complete.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Sarcoma of the Middle Ear and Mastoid.

Dr. Dench (*Archives of Otology,* December, 1902) presented at the section of otology at a recent meeting of the New York Academy of Medicine the case of a child one and a half years old, who had come under his care three weeks previously, giving a

history of having had a slight water discharge from one ear for ten days. Examination of the eyes showed paralysis of the right external rectus muscle. The canal of the ear was filled with a tumor covered with thin epithelium. This bled easily, and a small piece was detached. The report of the pathologist showed that the tumor consisted of simple granulation tissue covered with epithelium. The child was sent to the hospital, and two days later the typical mastoid operation was done. On exposing the bone over the mastoid there was found a cauliflower-like mass occupying the region of the antrum. This was removed, and the bone was found to be softened in every direction from the site of the growth. All soft bone was removed, and in so doing the dura over the roof of the tympanum was exposed. There was free bleeding, and it seemed on examination the growth extended to the apex of the petrous pyramid, and that involvement of the dura at this point accounted for the paralysis of the sixth nerve. The growth was at first thought to be benign, but further examination showed it to be an epithelial sarcoma. The child has since done well, the wound has closed, and there has been some improvement in the power of the sixth nerve. There is, however, evidence of recurrence of the growth at the tip of the petrous pyramid and in the canal. A microphotograph of the growth was shown.

In regard to the future of the patient, Dr. Dench expressed the opinion that it would probably die; however, he has decided, if the patient's condition continues as at present, to make a thorough extirpation of the growth by a modified Gasserian ganglion operation. He has done this on the cadaver, and found the operation to be simple and to give a good exposure of and free access to the upper surface of the pyramid. It is also his intention to tie the common carotid to cut off the blood supply to the part and thus retard the growth, the method of cutting off the arterial supply having been found valuable in treating new growths in the nose and nasopharynx.

Continued Pain After Mastoid Operation.

Dr. Harris (*Archives of Otology*, December, 1902) presented at the section of otology at a recent meeting of the New York Academy of Medicine a case of continued mastoid pain after operation. The case was presented for diagnosis, the following history being given: Young woman, twenty-four years old; was first seen in April, 1902, and kept under observation for two weeks. At that time she complained of pain over the region

of the mastoid and some elevation of temperature. There was a history of old suppurative disease, but there had been no discharge for some time previous. The drum was entirely absent. The patient was operated on in April, and no diseased bone was found, nor any granulation tissue; the wound healed almost by first intention. For a short time after the operation all pain disappeared from the mastoid, but she complained of pain above and higher up; this latter has persisted until the present time. The patient has been treated by Dr. Leszynsky with electricity, tonics, and KI. On recent examination it was found that pain was present over the mastoid along the line of incision. This pain comes on twice a week, and is so severe that the patient seeks relief from anodynes. She is well nourished, able to work, and eats well, except while the pain is present. At the time the pain comes on there is a watery discharge from the ear. There is also tenderness over the upper portion of the temporal bone and over the mastoid; also when the pain is present over the mastoid on the operated side it is also present on the other side, where there is no trouble at all.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,

Member of the American Dermatological Association.

Fibrosarcoma Cutis.

In an article published in the *Journal of Cutaneous Diseases* of January 9, 1903, James C. Johnston, of New York, writes of the fibroblastic or spindle-celled sarcomata of the skin.

There are some striking clinical features in fibroblastic sarcoma which are characteristic of this type and distinguish it in its gross appearance from endothelioma. These features are the very slight malignancy, the consequent or concomitant absence of metastasis in the skin, nodes, and viscera, the extremely slow spread, the tendency to progression in one spot with spontaneous involution in another, the absence of pigment except for that which results from hemorrhage, and the superficial character of the ulceration.

There are two clinical varieties of sarcoma, one in which the tumor process occurs in a single patch, and one in which it is disseminate and the growths rarely attain a large size.

Evolutionary changes are best seen clinically in a tumor which

occurs in a diffuse patch. The impulse to cell proliferation, whatever that may be, selects a spot apparently at random, and the growth rises above the skin level, carrying the epidermis with it and generally keeping the covering intact. Ulceration is superficial and is seen generally in situations where rubbing from the clothes is constant. The tumors do not lobulate, but often, as in fibroma, show a basal constriction, due probably not to involution there but to a lateral spread above the site. In none of his cases has the constriction been carried to the point of strangulation of the pedunculated mass. As the growth is unlimited, so may spontaneous involution be complete.

Lupus Erythematosus.

In a communication to the *British Journal of Dermatology* (December, 1902) W. B. Warde, M.R.C.G., London, England, sums up his views as follows:

Lupus erythematosus is not a distinct pathological entity, but merely one instance of a common process frequently met with in a certain class of individuals, atrophic rhinitis being another.

The essential, and in rare instances the only, symptom is a pernicious edema, hard to remove, and apt to produce degenerative and atrophic changes.

This edema is due to a paralysis and dilatation of the small blood-vessels, ending eventually, after a longer or shorter time, and unless removed by treatment, in their degeneration and destruction, together with the granulation tissue that has formed round them in the usual fashion to endeavor to repair the damage.

This edema and vascular degeneration depends (*a*) indirectly on a feeble circulation leading to a state of malnutrition of the vessel walls, on strain placed on the vessel by flushing, on anatomical position, in that the skin is thinly stretched over unyielding parts, and on many other known and unknown causes; (*b*) directly on exposure to heat and cold, injuries such as burns, and on the presence on the skin of various efflorescences due to poisons, certain fevers (toxins), microbic activity, and on other known or unknown causes.

The vascular degeneration and atrophy may be directly induced by certain superficial types of lupus vulgaris, and be predisposed to by a tubercular inheritance or by acquired tuberculosis, but the lesions essential to the disease are in no sense tubercular.

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ORIGINAL CONTRIBUTIONS.

TENDON GRAFTING.*

BY DANIEL LA FERTÉ, M.D., DETROIT, MICH.

It was in the year 1882 that Nicoladoni proclaimed to the profession that it was possible to cut the tendon of a healthy muscle, attach it to a disabled one, and have it perform the function of the latter.

Not much attention was paid to this announcement, as it was looked upon as one of those vague and wild notions that now and then find their way into print. Time has proven the value of this operation. It is no longer in the experimental stage; it is an established procedure and full of brilliant possibilities. It is adapted to the relief of a variety of affections. If it is of especial interest to the orthopedic surgeon, it is nevertheless not devoid of all interest to the profession at large. While frequently undertaken for the relief of deformity due to infantile paralysis, this operation is applicable to the relief of the various forms of paralytic clubfoot from whatever cause; to deformity arising from traumatic nerve lesions, or destruction of some of the muscles of a part.

In this operation, it is almost needless to say, the muscle which it is intended to attach to the paralyzed one should be as near the latter as possible, and its function should be as near alike as possible to the function formerly possessed by the paralyzed muscle. Where the function of the graft is nearly the same as was that of the paralyzed one, the patient is soon able to perform the new movement. He feels that he has a firm base of support, the graft acting as a supporting band applied where it is most required; and having selected one or more muscles from a certain group to graft to a paralyzed muscle does not perceptibly weaken that group, while it confers power to the paralyzed muscles.

*Read before the Saginaw County Medical Society, Dec. 9, 1902.

There can be no doubt that the field wherein this operation is applicable is destined to become quite wide. Take for example paralytic talipes, and instead of performing tenotomy on the healthy muscles and lengthening them, and possibly weakening them, and bringing the foot in position and keeping it passively in that position, tendon grafting aims to keep what power is left in the muscles about the joint, and after these muscles have become attached firmly in their new position (which is generally in about three weeks), to develop their size, action, and nutrition.

There are many causes influencing the results attained from tendon grafting. Where there is a great deal of paralysis existing the results are not as brilliant as those obtained where only one or two muscles are affected. The worst cases are those where there is a great deal of atrophy, blueness and coldness of the parts, indicating a low state of innervation. In such cases it would be wise to prepare the part for operation by following for some weeks or months a course of massage and electricity. In this connection I may state that I have not been able to get as much good from electricity as is claimed by some, but I am a firm believer in the efficacy of massage. In very young children the good results of operation are slow in manifesting themselves because the child has not obtained volitional control over his muscles, and therefore cannot so soon accustom himself to bring into action the graft in its new location.

The operation is easy of execution; all that is required is a fair knowledge of anatomy. The tendon to be used is always cut squarely across at a certain point, having in mind always that when it is brought to the point where it is intended to fasten it, it may not be put too much on the stretch, else there would be danger of it tearing itself loose. In my operations I have not found it necessary to split the tendon of the paralyzed muscle and insert the graft and sew it in the slit; I have merely brought the graft alongside the paralyzed tendon and sewed them together with fine sterilized silk for about three-quarters of an inch. The part is then fixed in its new position by plaster of Paris or something else, and left undisturbed for three weeks, when if everything has gone on well slight voluntary and passive movements can be commenced. After three weeks more, if it is a foot, the patient can begin to walk.

In the case of larger tendons, as the tendo Achillis, it is possible to divide it in two or three parts and fasten to different points. If, on account of the diminutive size of the paralyzed tendon, it cannot be found, the graft can be attached to the perios-

teum at a point corresponding to the location that would have been selected in the paralyzed muscle.

We have thus far considered tendon grafting as applicable to paralytic cases. This procedure is applicable also to spastic cases

FIG. 1.

where certain groups of muscles are overstretched and weakened by spastic contraction of their opponents. A good example of this class is furnished by the cerebral paralysis of children where we

have powerful flexion of the hand upon the forearm and extreme pronation. In such a case it is possible to extend the hand by dividing all contracted muscles at the wrist. The extreme pronation can be overcome by connecting the pronator radii teres mus-

FIG. 2.

cle into a supinator. This is done by making an incision about the middle of the forearm along the border of the supinator longus muscle; the radial artery and nerve are defined and pulled

FIG. 1.

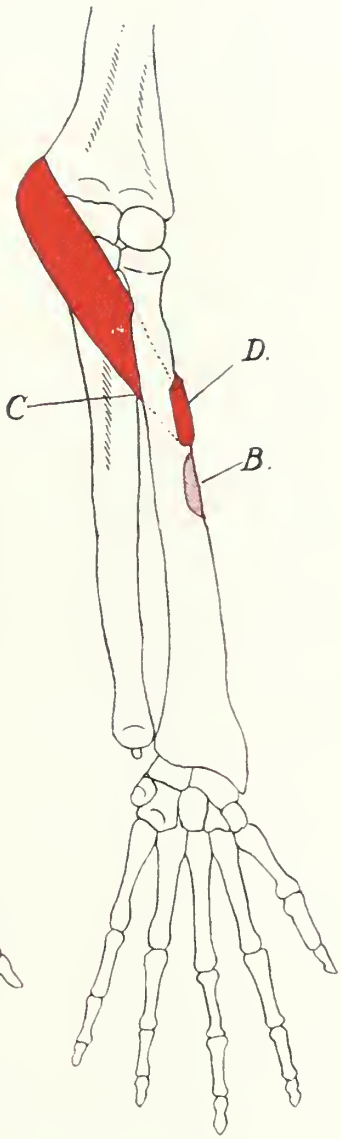

FIG. 2.

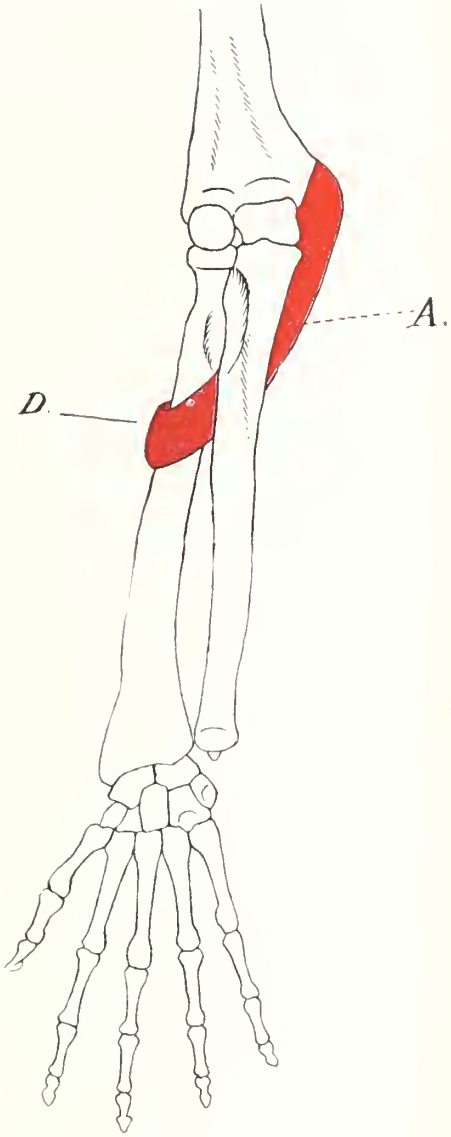

FIG. 3.

to one side. The muscle together with its periosteum is detached from the radius, carried through a slit made in the interosseous membrane, care being taken not to wound the interosseous nerve and artery, and is fastened with silk sutures to the outside of the radius a little above its normal insertion (Tubby). When this muscle is educated to act in its new position some of the extra power of the pronators is transferred to the supinators, thus establishing more balance between the two sets of muscles.

During the last four years I have operated upon four cases for paralytic affections, and in one case for spastic contraction of the forearm. Three of the former cases I do not feel justified in including in this paper, as they are comprised in an article about to appear in one of the medical journals. One of the cases, in fact my first case, was that of a young man twenty-three years of age who was afflicted with a case of talipes calcaneus of acquired origin. He stated that when he was a mere child he caught cold in a corn-field and had a severe attack of rheumatism in his leg—in all probability an attack of neuritis. In his case there existed also slight valgus. Both peronei muscles were cut near the tip of the external malleolus and stitched to the tendo Achillis. In an effort to remedy the valgus the tendon of the extensor proprius pollicis was cut across and stitched to the tendon of the tibialis posticus. The result was fairly good; the calcaneus was cured, and the valgus slightly if at all improved.

The case of spastic contraction was in a young girl nineteen years of age, who showed the characteristic symptoms on one side of the body (Fig. 1). The foot was in the position of severe equinus, and the forearm forcibly flexed on the arm, the wrist flexed on the forearm, and the latter in a position of extreme pronation. The deformity of the foot was remedied by lengthening the tendo Achillis. The flexion of the hand was overcome by dividing the flexor tendons at the wrist (Fig. 2), and the pronator radii teres muscle was converted into a supinator by the method described above (see diagram, Fig. 3).

From the time the bandages were removed in this case at the end of the third week improvement was quite marked, and she continued to gain power and action in the forearm until at the end of six months she could use her hand at delicate knitting and needlework.

THE TREATMENT OF CHRONIC DIARRHEA.*

BY CHARLES D. AARON, M.D., DETROIT, MICH.,

Professor of Clinical Gastroenterology in the Detroit College of Medicine; Consulting Gastroenterologist to Harper Hospital, etc.

It is well known that diarrhea is a symptom of various diseases which may be classified according to their respective etiology. There is the diarrhea superinduced by ulcer of the rectum, the diarrhea caused by intussusception, and the diarrhea the result of intestinal catarrh. Secondary catarrh may occur in all conditions which lead to sudden disturbances of the circulation, such as invagination, thromboses, emboli, peritonitis, etc. Aside from these there is a class of specific diseases which often manifest themselves by diarrhea, such as typhoid fever, cholera, and intestinal tuberculosis. It may be said, on the whole, that all of these, however much they may differ in their origin, are characterized by the pathological fact that there is a change in the mucous membrane of the intestine. It is true that there is a species of diarrhea which differs from all others, being unattended by a pathological or an anatomical change in the mucous membrane of the intestine. But such cases are to be regarded rather in the light of an exception. The mucous membrane of the intestine plays an important rôle in the normal process of digestion, and a disturbance of the digestive process, such as diarrhea is a symptom of, is usually coincident with certain conditions of the mucous membrane. Ewald, Nothnagel, Rosenbach, Penzoldt, Oppler, and Einhorn have drawn our attention to diarrhea of a dyspeptic origin, and have pointed out the probability that the stomach may be the cause of the trouble. Fleiner reports a case in which the secretory functions of the stomach were perfectly normal and yet hypermotility was the cause of a chronic diarrhea.

Some cases of chronic diarrhea tire our patience because they refuse obstinately to respond to the usual method of treatment. In chronic diarrhea of dyspeptic origin we have a diminution in the secretion of gastric juice. This diminution is compensated for in the small intestine, but eventually an insufficiency sets in, and hence we have a catarrh of the intestine. When the stomach does not do its work properly, too much is demanded of the intestine. The intestine may do the work of the stomach for years without any apparent difficulty, as has been proved in many

*Read before the Detroit Academy of Medicine, Detroit, Mich., Jan. 27, 1903.

cases of achylia gastrica. The intestine carries on the increased work under unfavorable conditions, being subjected to abnormal irritation by the food that has not been properly prepared by the stomach. This irritates mechanically the delicate mucous membrane. It can also be irritated chemically in consequence of abnormal fermentation due to a decreased secretion of hydrochloric acid. In atony, where the food remains too long in the stomach without the presence of the natural antiseptic, free hydrochloric acid, fermentation takes place. In infants, as the gastric glands are not fully developed, fermentation is in no way arrested and fungi thrive. A similar condition exists in adults in all degrees of catarrh of the stomach. Fungi enter the stomach and multiply freely, and, entering the intestine, establish nidi for propagation, and thus they may become the proximate cause of diarrhea. The main function of the hydrochloric acid, therefore, does not lie in its capacity to digest albumin, but rather in its destructive effect on microörganisms. Since, therefore, under normal conditions free hydrochloric acid arrests fermentation, and since it has been shown that fungi and great fermentation exist where hydrochloric acid is wanting, we are justified in concluding that in certain cases of diarrhea the proximate seat of trouble is in the stomach, which has allowed the microörganisms to pass into the intestine unchallenged, and there their multiplication can progress rapidly. We may have different degrees in the secretion of gastric juice with and without disturbance of motility. We also have functional disturbances of the stomach without the patient suffering from chronic diarrhea—in fact, he may even be constipated.

It is not always clear in certain stomach diseases why severe intestinal disturbances should be present and mask the stomach trouble. The attacks of diarrhea after all depend upon the resisting power of the intestine and on its digestive strength. In chronic diarrhea there is an insufficiency of digestion in the small intestine. Patients realize this only when they have diarrhea. They may have stomach trouble for years, but not severely enough to induce them to consult a physician, until they are suddenly taken with a diarrhea. Most cases of chronic diarrhea are attended by a catarrh. This is evidenced by the fact that a large quantity of mucus is mixed with the feces. Schmidt has shown that raw connective tissue is digested in the stomach, but not in the small intestine. In such cases a great quantity of connective tissue is found in the feces after the patients have been eating raw ham. This tissue acts as an irritant to the mucous membrane and hastens peristalsis.

The symptoms are about the same in most cases of diarrhea. The patients complain mainly of frequent evacuations; these may occur from one to eight or more times daily, depending upon the condition of the patient and upon his method of living. Excitement and exposure may increase the number of evacuations. Many patients have days or weeks of regular movements with attacks of diarrhea lasting a variable length of time. Others do not have a formed stool for months. The evacuations often occur immediately after meals, and may force the patient to leave the table. A majority of the patients do not complain of stomach trouble. Some after careful questioning will admit slight symptoms of stomach disturbances, but as a rule they lay great stress upon their intestinal difficulty. Some patients who are very sick appear to be well nourished, while others with meager symptoms have lost considerably in flesh. Palpation of the abdomen seldom reveals sensitive spots. The evacuations have an unusually sour odor, sometimes so penetrating that it may fill the whole room. Their consistency is from a soft mushy mass to fluid, mixed at times with some solid fragments. We may find large quantities of mucus in the feces. When mucus is present catarrh of the intestine usually exists. In achylia gastrica we can have chronic diarrhea without any stomach symptoms, thus misleading the practitioner from the cause of the disease. Such cases are recorded in literature, and are now found to exist oftener than was formerly supposed.

Many cases of latent stomach trouble manifest themselves through the intestine. Examination of the stomach contents in these cases shows the secretion to be abnormal. In the majority of instances meat is found in large quantities unchanged after a test dinner. Achylia gastrica is not always found in these cases, for we may have all degrees of decreased secretion of gastric juice associated with atony and interference with motility. In the majority of cases there is no free hydrochloric acid at the height of digestion, but there is a great combined acidity. The secretion of hydrochloric acid is slow, and instead of attaining its normal degree in three hours, it requires seven hours or more. I would suggest in every case of stubborn diarrhea we should not content ourselves with the examination of the feces alone to establish a catarrh of the intestine, but to examine also the stomach contents.

In regard to the diagnosis of nervous diarrhea, let me say that all diarrheic patients are affected by nervous influences, such as excitement, fear, worry, etc. They may give neurasthenic symptoms, as pressure in the head, insomnia, irritability, and depres-

sion. Patients become nervous through their suffering, and the nervous condition is secondary, not primary. Nervous diarrhea occurs after a fright or some strong emotion and is simply transitory, while chronic nervous diarrhea is an extremely rare affection.

In the treatment of chronic diarrhea I find that most of my patients before consulting me have used opiates in all forms without benefit. The question is, shall we give opium in such cases? The diarrhea arises in consequence of the irritation of the intestinal mucous membrane produced by the fermented and insufficiently chymified stomach contents. Opiates retard peristalsis, and allow the decomposed material to persist in irritating the intestinal mucous membrane. For this reason as soon as we discontinue the use of opium the diarrhea will increase more than ever. We must do away entirely with opiates as long as decomposition is present and undigested food comes away in the feces. Our duty under these circumstances is the same as in any acute diarrhea—that is, to help the efforts of the intestine to get rid of its undigested putrefied material. We have an effective method for this purpose in stomach lavage and high colon irrigation. Washing out the stomach removes the material which irritates the intestinal mucous membrane. This is especially effective in atony, when the combined acidity is high and the empty stomach acid. The washing out of the colon removes the irritating material. The irrigation is done with a long soft rubber tube, to which a large glass funnel is connected. The patient should be lying down, preferably on the left side, with the hip raised. Three to four quarts of lukewarm water is used with the lowest possible pressure. The water runs in slowly by slightly raising the funnel, then lowering it and allowing most of the water to run away at once. Thus the feces, gas, mucus, and millions of bacteria which have irritated the intestine are removed. In severe cases with decided fermentation or excretion of a great deal of mucus, high-up colonic irrigation is imperative. If the diarrhea occurs during the night, as is sometimes the case, the colon washing should be done in the evening. The diet in these cases is very important. All foods that leave much undigested residue must be avoided, for this maintains the irritation of the mucous membrane.

It is scarcely necessary to say that the diet plays an important rôle in the cure of chronic diarrhea. It is not enough to give verbal directions to the patient, for these are usually disregarded and quickly forgotten. I wish to lay stress upon the necessity of a written diet sheet, not stereotyped, but prescribed according to

the requirements of the particular case. The diet should consist of farinaceous foods in the form of gruel, arrowroot, sago, tapioca, farina, rice, corn-flour and barley, macaroni; also bouillon and egg, broths with rice, souffles, zwieback, butter, etc. Milk is not tolerated. For thirst cold tea or dilute claret is valuable. Meat must be done away with entirely, and in its place eggs, which are easily digested, substituted. Six eggs or more can be given with safety, in twenty-four hours, either raw, poached, or soft-boiled. Albumen preparations, as Mosquera beef jelly, Valentine's beef juice, tropon, nutrose, encasin, soson, and plasmon are very valuable. Eichelcacao is an especially valuable food for diarrhea. One to two teaspoonfuls boiled with a cup of hot water can be taken three or more times a day. Somatose should be forbidden. When there is the slightest tendency to diarrhea, vegetables, even the fine ones, must be avoided. In severe intestinal catarrh vegetables must not be eaten for a long time after the stools have become normal. Many patients who seem to be entirely well have a return of their diarrhea and excrete mucus after eating vegetables a couple of days. It is important to control and regulate the diet by frequent examinations of the feces macroscopically as well as microscopically. This will show whether and to what degree the patient is able to digest meat or starch, and to what extent vegetables are digested, or whether they pass unchanged through the intestine, and what effect the treatment has upon these conditions. Intestinal parasites and their eggs can be found, if any are present. As the patients begin to improve, the white meat of chicken seems to agree with them.

Many authorities recommend astringents, but they act poorly unless given with a strict diet, and even then they may often be dispensed with. When fermentation is absent and undigested food is not found in the feces, astringents can be given. I prefer the vegetable astringents, and use the compound tincture of catechu in teaspoonful doses three or four times a day. Bismuth, silver nitrate, tannigen, tannalbin, and other intestinal astringents may be mentioned.

I find hydrochloric acid after meals very efficacious. It acts as an antiseptic, destroying microörganisms and preventing abnormal fermentation. It converts the proenzymes into active ferments and thus assists digestion. It changes the stomach contents, so that it has a normal regulatory influence on peristalsis. In prescribing the acid, I suggest that my patients take it in gelatin capsules, so as to prevent decalcification of the teeth. I have found, however, that the acid penetrates the ordinary capsule too quickly, and to prevent this I arrange that a smaller capsule con-

taining the drug is encased by a larger one, which gives sufficient thickness to obviate the difficulty of quick penetration. This double capsule retains the drug for a long time and gives the patient ample time for swallowing, and reduces to a minimum whatever annoyance or risk is involved. Immediately before taking, the patient is instructed to use an ordinary dropper for filling the capsule. Parke, Davis & Co. have devised an apparatus for the manufacture of these capsules; they hold fifteen minims of hydrochloric acid. I have used this method of administration for some time and have found it practicable and acceptable to patients.

Mental and bodily rest are advantageous. When the patients are very ill they should be in bed. In lighter cases I advise them to lie down after every meal. For pain, hot compresses and poultices are valuable.

The result from this treatment shows itself quickly. The diarrhea begins to subside in a few days, and the evacuations are of a normal consistency and number in the course of a week. The treatment should be continued for some time.

32 West Adams Avenue.

THE PRESENT STATUS OF MERCURIAL MEDICATION IN SYPHILIS.

BY HENRY B. HOLLEN, PH.G., M.D., NEW YORK.

That mercury and potassium iodide are indicated remedies in the treatment of syphilitic infection is known by every member of the profession, but concerning the form and manner in which the former is best administered there are many who hold unsettled ideas. Likewise, there exists much confusion in regard to the conditions which call for one or the other, and relative to the length of time a syphilitic should be treated there seems to be a variance of opinion. From the early time when Gilinus fought the specific epidemic up to the commencement of a period dating past only a few decades the history of mercurial administration has been that of a long, misinterpreted, and erroneous experiment. But the days of ptyalism are past. The judicious treatment of the present day, comprising of course attention to diet and hygiene, yields results which are among the best in medicine.

Syphilologists have come to recognize the fact that it is unwise to institute treatment before diagnosis is fully established. Innumerable and irreparable mistakes have been made by those who have not made it a routine procedure to commence to give

mercurials only on the first appearance of the "secondaries." The primary lesion has proven to be most difficult and uncertain of diagnosis. When, however, the cutaneous and other manifestations of the secondary stage have appeared, and the element of doubt is removed, the question as to the form of mercurial best adapted to an individual case arises. I do not think that this question is nearly so important as that which concerns the dosage and adjunct medication. While, as a general rule, the preparation selected is largely optional, some preferring one and some another, there can be no doubt that extremes of susceptibility exist and are present in many cases of specific infection. It is in these cases that the proper results cannot be obtained even with the best of care in the graduation of the dose of corrosive sublimate, for instance, when some other form of mercury will be found constitutionally appropriate.

Tertiary symptoms, it matters not when they arise, call for a commencement of potassium iodide. The mercury may be dropped or given in conjunction in "mixed" treatment. The indications for potassium iodide have been thus enumerated by a well known authority: (1) Late gummatous or ulcerative lesions; (2) formidable nervous, visceral, or other non-cutaneous symptoms, with late or early syphilodermata; (3) early or late manifestations which assume the so-called galloping type, being rapidly succeeded by more formidable lesions, the late phenomena appearing early; (4) early or late symptoms occurring in cachectic, strumous, or otherwise debilitated patients.

The intermittent treatment, advocated by Fournier, has not been found so generally satisfactory as the continuous method. The latter has seemed much more rational. In regard to the length of treatment it may be said that the established dose should be continued for three months after all symptoms have disappeared. At the end of that time it should be decreased one-fourth and taken for several months; then decreased again to one-half the original dose and kept up for several months longer, the idea being to continue medication for about a year after the disappearance of symptoms, during a period of gradual discontinuance. Furthermore, during the succeeding five years the patient would better be advised to take mercurials for two weeks in each quarter. It is hardly necessary to add that any outbreak in the later life of the syphilitic demands a renewal of active treatment.

The importance of giving strict attention to the general health of the patient, and the maintenance of good digestive function, cannot be too often emphasized. It is necessary to avoid all semblance of digestive disturbance. Mercurials and poor assimilative powers do not go together. Among the preparations in

use are the following: calomel, corrosive sublimate, the protiodide, biniodide, tannate, benzoate, acetate, albuminate, salicylate, and carbonate. Of the former, corrosive sublimate and mercury protiodide are more generally employed. Mercuric chloride, while being very powerful and quick-acting, is irritating to the stomach unless closely watched, and on the whole is more difficult to administer than the protiodide. It may be given in aqueous solution, dissolved with the aid of about twice its quantity of ammonium muriate. Milk or wine of cocoa will serve well as vehicles. The protiodide may be given in a pill, capsule, or tablet triturate. The Garnier and Lamereux preparation, each pill containing one centigramme of the drug, is very satisfactory. Mention must be made also of the official mercury with chalk, which has found favor with many.

Appropriate dosage is ascertained by gauging the patient's susceptibility. In the administration of mercury protiodide it is best to begin with one-eighth of a grain three times daily after meals. Increase the dose every two days by one-sixteenth of a grain until marked improvement results or the beginning of physiological action becomes apparent. In the latter case it must be lessened and advanced more gradually. When the Garnier and Lamereux pills are used it is a very simple matter to graduate the dosage. Keyes's method is to increase the dose only on each third or fourth day until irritative lesions are produced, when after a two-day interval the quantity last taken is reduced from one-half to one-third. Gross finds the patient's "safe-point" by using pills of one-fifth of a grain and directing one pill to be taken after each meal, the first day. The next day two are ordered after breakfast; the succeeding day two after dinner; continuing in this manner, adding one pill a day. The dosage is increased until slight diarrhea, griping, and the mouth symptoms present themselves, when one pill is taken off each day until these effects disappear. As in the case of the protiodide, corrosive sublimate is to be commenced with caution, gradually approaching the patient's "safe-point" of susceptibility. One-sixteenth of a grain of corrosive sublimate, however, is as large a dose as should be given in the beginning. The dosage of mercury with chalk ranges from one-half of a grain to three grains.

It is advisable to refrain from the use of opium with mercurials, but there is, here and there, a case which seems to require it. In such cases one-twelfth of a grain may be added to each dose and discontinued as soon as the digestive disturbance is brought under control. Likewise, small amounts of Dover's powder may be employed. A pill that has been found serviceable is one of hydrarg. prot. gr. v, pulv. ipecac et opii gr. xl, and ex.

gentian. q. s. to make pil. No. xx, one pill to be taken three times a day. An important phase of adjunct medication is incorporated in the so-called "tonic treatment," the results of which have been so good that it should appeal to every practitioner. It is especially called for in anemic and debilitated states, in which we invariably find the assimilative functions deficient. Here supporting treatment is essential. Iron may be given in the form of the sulphate or peptonate. A good way to administer it is as the citrate in sherry wine. The combination of extract of gentian or nux vomica with the protiodide is very satisfactory in many cases. In certain individuals arsenic will be found to work in harmony with the specific remedies, and in mercauro it has been skilfully combined.

Relative to other means of administrating mercury than ingestion may be mentioned inunction, bath, fumigation, and injection. In those cases in which griping and diarrhea are intractable, inunction is resorted to. The oleate of mercury is not as desirable as the well known blue ointment, beginning with applications of thirty grains. Hypodermic injections are not to be used in a routine manner, but as accessory treatment where speedy action is necessary, as in syphilis of a malignant type or iritis. In instances where the eruption is pronounced, especially when the face is much involved, the condition may be cleared up in a very short time by injecting intramuscularly the salicylate of mercury, gr. xxiv in albolene or benzoinol ℥j. Thirty minims is injected at intervals of every five days until the results are accomplished. Given in this emulsified form the mercury is absorbed very slowly, and in consequence its action is long-lasting. In Europe the bicyanide of mercury is largely used as accessory treatment. The pain which some individuals experience at the site of puncture in the first injections may be offset by the local application of hot compresses.

Among the medicinal agents which are as yet *sub judice* are iodo-mercuric-cacodylate and hemophenol (mercury-phenol-disulphonate of soda). The former has been used in France to some extent, and is said to work well in denutrition and neurasthenia. The lactate, which is red oxide of mercury in ten-per-cent lactic acid, is favorably commented upon in some quarters. The tannate is recommended by Cooper, who gives one grain three times a day. Being assimilated in the upper intestine it is a convenient preparation to give in cases of gastric irritability. The Schwackmann subarachnoidal injection method is still in its experimental stage, and the usefulness of the measure is, at the present time, only a matter of conjecture.

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THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE PROPAGATION OF THE FAMILY.

That zeal for running the machinery of the universe which frequently assails the best of us would probably not be possessed of such vitalizing virtue were it too strongly tinctured by the uncertainties of the reasoning spirit. A wail of sadness has recently been heard in the land, because it is alleged that that portion of the community which is esteemed the flower of creation has not fulfilled its obvious destiny to prolong its kind, by availing itself of the accepted methods of perpetuation.

This aversion to assuming the responsibilities of race propagation which is said to be more or less affecting the American nation is a characteristic which may be condoned in played-out Latin nations, but it should not, it is said, be displayed by a young and lusty power like our own.

It is some such thought as this which doubtless animated that admirer of the strenuous life, the President of the United States, to state his opinions so vigorously to the effect that the good seed of the nation was going to waste, and that it was the duty of good citizens to do more in the way of propagating their kind, and so to create a posterity which should perpetuate and evolve the imperial instincts of their progenitors.

It is doubtless a part of wisdom to counsel in this wise. Those who have achieved and acquired are those that should transmit their strenuous characteristics to the coming race. The matter, however, need not be taken too seriously. Nature herself seems to be a great believer in the *laissez-faire*. "Nature is made better by no mean," as the poet says. The so-called flowers of creation may think they are doing great harm by not perpetuating themselves in their progeny, and by so doing to give inheritors the benefit of their acquired characteristics: but really the flowers of creation need not fret themselves about it, and if the Weismann

doctrine of inheritance be true, they do not enter very much into the solution of the problem. Nature will not be frustrated in her calm intent by being deprived of any such contribution as they might make. She will if necessary get along without the fine seed. Nature made the giant trees of California, not arboriculture. Nature will raise up seed to herself, as it were, and will continue to produce Shakespeares out of unknown ancestors, and poets and philosophers out of the babes and sucklings of ploughmen and sailors. The work of the universe will go on silently but inexorably.

Then, again, it might be pointed out that those in whom the impulse of propagation is from any cause lacking are just those whom nature desires to eliminate from her scheme of perpetuation. The Fifth Avenue belles and dandies who may think themselves the flower of civilization, the final product of evolution, the culmination of all that has been, are not necessarily such from nature's point of view. Nor is the world losing any irretrievable treasure by the fact that Fifth Avenue marriages result in an average of one-third child a family. Culture is only an efflorescence of civilization, it is not civilization itself. The refined taste, the artistic temperament, the delicate appetite, the sentimental aptitude, are produced from nature's alembic through processes for which she has furnished no key. A simple bootblack is able to invest himself with these distinctions in a few years, if the conditions are right, and yet those who may possess these decorative attributes cannot deliberately bequeath them to their offspring, any more than a bedizened grandee can transmit the spiritual graces of which his gold and tinsel are the emblems.

There is a good deal of waste space in the world, and there would seem to be abundant reason for permitting the play of much latitude of motive. It is out of the struggle of instincts and passions the larger qualities of mind and character are evolved, and perhaps did we have a more abiding faith in nature we should be less critical of the methods by which she accomplishes her designs.

EDITORIAL NOTES.

The Hardening of Children.

One of the fads which has been followed most assiduously in this country of late years is that which has been known as the "hardening of children." Parents have deemed it necessary to submit their offspring to all sorts of measures whereby they might become toughened and able to resist disease. That this has

been carried to great extremes in many instances there is no doubt, and instead of the desired end being attained the children have become greatly weakened by the rigid measures adopted for what was supposed to be for their benefit. Dr. Haecker has recently, in an article in the *Münchener medicinische Wochenschrift,* shown that cold baths are not only unnecessary but often injurious; that they increase rather than diminish children's susceptibilities to "colds," and induce coryza, throat affections, bronchitis, and pneumonia. Haecker advises, instead of cold baths, accustoming children to the room temperature by occasional stripping with permission to run about naked before retiring. He says that children should be sent out-of-doors at all times except during stormy weather. Children should be allowed to go barefooted during the warm months of summer. Haecker's advice is certainly good, and the promiscuous hardening of children is something to be deplored. Attempts to harden delicate children should be done with the greatest of care and under the guidance of the family physician.

Pay of Medical Officers of the Russian Army.

The revised scale of pay for medical officers of the Russian army allows at entrance $400 a year. After five years this is increased by annual increments, so that after nine years' service the officer is in receipt of $490. After a further period of four years he receives $650 a year, and four years later—that is, after seventeen years' service—his pay amounts to the magnificent sum of $750 a year, and this of course only a few can ever hope to attain. The small pay allowed makes it necessary that officers have independent means to enable them to live in a style befitting their rank and station. These conditions must debar many bright and capable young medical men from entering the army of the Czar, and the army suffers in consequence.

Surgery of the Heart.

One of the most notable achievements in surgery that has been made within the past year or so is that of suturing heart wounds. A sufficient number of cases is now on record to demonstrate that the heart may be sutured with comparative ease, and that the hemorrhage can be readily controlled. It has been suggested by an eminent English physician that it might be possible to treat mitral stenosis by surgical methods. This suggestion opens quite a field for experimentation upon the lower animals, the results of which might lead to knowledge of great value in the surgical treatment of heart lesions.

ITEMS AND NOTES.

THE epidemic of bubonic plague at Tokio is increasing.

THE site for the Pasteur monument in Paris is as yet undecided.

FROM Milan comes the intelligence that Professor Sormagni has discovered the microbe of hydrophobia.

IT is announced that a charter covering a period of twenty years has been granted the American Congress of Tuberculosis.

ANDREW CARNEGIE has made a gift of $50,000 to the College of Physicians of Philadelphia, on condition that the society raise a like amount.

IT is asserted that yellow fever has made its annual appearance at Vera Cruz, Mexico. Five deaths, including two Germans, have been reported.

THE Western Ophthalmologic and Otolaryngologic Association will hold its next regular meeting at Indianapolis, Ind., April 9, 10, and 11, 1903.

TWO French professors, Lannelongue and Landouzy, have been decorated by the German Emperor with the Royal Order of the Crown of Prussia.

THE Italian commission which has been studying yellow fever in Brazil has, according to its report, rejected the theory that mosquitoes carry the infection of yellow fever.

THE Illinois State Medical Society will hold its annual meeting in Chicago, April 29, 30, and May 1 and 2, 1903, instead of May 19, 20, and 21, as previously announced.

DR. JEAN CHARCONSON, the well known nervous specialist of Paris, is now organizing an expedition to go to the polar regions, including a scientific trip to Iceland, Spitzbergen, and Nova Zembla.

DR. SIMON FLEXNER, professor of pathology at the University of Pennsylvania, has received a grant from the Carnegie Institution, and his assistant, Dr. Noguchi, has been appointed the first research assistant.

At the Founders' Day celebration of the Northwestern University, held in Chicago, January 28, Dr. W. W. Keen, of Philadelphia, professor of surgery at Jefferson Medical College, received the honorary degree of Doctor of Science.

According to Dr. Kingsman, the medical member of the school board in Washington, D. C., fully fifty per cent of the children attending schools in the southwestern section of the city are sick with either measles, whooping-cough, or chicken-pox.

It is asserted that the Department of State has received advices from Mazatlan, Mexico, that the plague was brought to that city by rats among vegetables shipped direct from Chinatown, San Francisco. The Charity Commission of the city has received $130,000 to be used in combating the plague, and money is still pouring in from all parts of the country.

The Craig Colony prize of $200 has been awarded to Dr. Julius Donath, of Budapest, Hungary, for his paper on the "Presence of Cholin in Epilepsy and its Significance in the Production of the Convulsive Attack." The award was made by a committee of the New York Neurological Society, consisting of Dr. Pearce Bailey, Dr. Christian Herter, and Dr. George W. Jacoby.

It is stated, says *American Medicine,* that investigations have shown the foodstuffs shipped to Honolulu from Japan and China via San Francisco to be responsible for the recent outbreak of plague there. Since these foodstuffs were imports at San Francisco, and reshipped to Honolulu, it is fair to assume that the former city is in some danger from this source of infection.

It is reported that Bishop Brent of the Philippines, late of Boston, is at the head of a movement to establish a large non-sectarian hospital in Manila, which is to be molded after the Boston City Hospital. The government has been petitioned to aid in this undertaking, which, under present conditions, could not be supported by private effort.—*Boston Medical and Surgical Journal.*

The St. Petersburg Academy of Sciences has offered two prizes, one amounting to $2575 and the other to $515, for the best papers elaborating protective measures against poisoning by fish toxins. The contest is to be international, and the papers may be written in English, German, French, Latin, or Russian, but must be received by the Russian Minister of Agriculture not later than October 1, 1903.—*American Medicine.*

It is stated in the *Semaine Médicale* that in order to give France a manifest proof of its friendly feeling, the Siamese government has decided to create at Bangkok a bacteriological institute to be under the exclusive direction of French physicians, and to institute forthwith in connection with the health department a service of sanitary works, having at its head a French engineer, and reënforced by other engineers, also French.

The annual report of the New York State Board of Medical Examiners shows that the number of candidates for medical licenses in that State reached its high-water mark in 1898, when 869 applicants appeared. There has been a steady decrease since, only 685 applicants for license appearing in 1902. Since the establishment of the board, 7034 candidates for license have been examined, of whom 5528, or 78.5 per cent, have been successful.

An exchange states that a new disease has arisen from the prevalent use of furs. The malady is supposed to be a germ disease, and is not contracted from the expensive furs, but rather from those of the cheap quality, which have been dyed and otherwise treated to imitate the more expensive. Those in the fur shops who are continuously trying on furs are particularly prone to this disease from abrasions upon the face, neck, or arms.

Esmarch's eightieth birthday was celebrated with much ceremony January 9, with congratulations from scientific societies and members of the profession in all countries. His name is connected not only with military and other surgery, but with the organization of Samaritaner, or first-aid relief system in city and country. His pamphlet on "First Aid in Emergencies" has been translated into twenty-five languages. Esmarch married the aunt of the present emperor of Germany, and has been profusely decorated with honors and titles. He is the son of a physician at Toenning, and has been privat-docent and professor of surgery at Kiel since 1859. He bears his eighty years lightly, and is in vigorous health.

Recent experiments, made because of the frequency of typhoid fever in London, tend to show, says the *Philadelphia Medical Journal,* that typhoid bacilli survive extreme cold. It was discovered, however, that when frozen in liquid air the bacilli become extremely brittle, so that they can be triturated into an exceedingly fine powder and their cellular character destroyed. It is then possible to experiment with antidotes upon their poisonous contents, and it is hoped, before long, that this method will

lead to the discovery of a treatment which will destroy the germs of typhoid in the human body. The medical officer of health has recently issued an alarming report, condemning the vicinity of the Thames as being contaminated with sewage. Oysters, cockles, sprats, whitebait, and smelts must, therefore, be viewed with suspicion.

The following excerpt is taken from the message of the Governor of Michigan: "The State Board of Registration in Medicine favors amendment to the medical law having in view both the elevation of the standard and the uniformity of the act in connection with medical laws of States which have taken an advanced position, in order that worthy and well qualified physicians and surgeons who have been legally authorized to practice under the laws of other States may be given the right to practice in this State without being forced to submit to a repetition of the examination which they have previously undergone. In order that Michigan may be able to take advantage of the proposed reciprocal relations, it will be necessary to raise the standard of medical requirements of this State to that of the States willing to enter into reciprocity."

The committee of senators appointed to investigate the condition of lepers in the Hawaiian Islands have completed their labors and submitted their recommendations to Congress, according to *American Medicine*. A visit was made to the islands, and 176 witnesses were examined. The leper colony was visited and the condition found unsatisfactory. The committee advises that the management of the colony be transferred from territorial control to the Marine Hospital Service, with headquarters at Washington, and that a general leprosaria for all lepers of the United States be established in the Hawaiian Islands. There are 858 leprous patients in the settlement, and the opinion is expressed that there are many hundreds of other cases in the territory. One feature of the committee's report relative to the moral condition in the colony is the following: Under the existing management of the leper settlement indiscriminate, legitimate, and illegitimate cohabitation is permitted. Marriages are suffered to be celebrated between leprous men and women regardless of their physical condition. Children are born in the settlement of leprous unions and as a result of concubinage; and, strange as it may appear, the leading officials seem to regard all this not only as permissible, but protest vigorously against a system of segregation that would prevent it.

NEW PUBLICATIONS.

SURGICAL ANATOMY AND OPERATIVE SURGERY.

The profession will welcome the appearance of a new work on surgery which possesses so many obvious qualifications as does this one. The two qualities which have gone hand in hand in its composition are those of lucid description and accurate illustration, a combination of author and artist, which are admirable in result. The use of diagrammatic drawings is very extensive, as these have been found most satisfactory in modern teaching. The anatomical data furnished is sufficient, but is stripped of all that is not essential to the performance of the surgical operation under consideration. Students and practitioners of surgery may be recommended to use this work without fear of disappointment; it is compact in size, and contains 227 illustrations, which adequately elucidate the text.

Surgical Anatomy and Operative Surgery. For Students and Practitioners. By John J. McGrath, M.D., Professor of Surgical Anatomy and Operative Surgery at the New York Post-Graduate Medical School; Visiting Surgeon to the Harlem Hospital, and Assistant Visiting Surgeon to the Columbus Hospital, New York. Illustrated with 227 Illustrations. Including Colors and Half-tones. Pages xiv-559. Royal Octavo, Extra cloth, $4.00 net; sheep or half Russia, $5.00 net, delivered. Philadelphia: F. A. Davis Company.

THE PHYSICIAN HIMSELF.

It is unnecessary to extenuate to any extent the reputation already achieved by this work. It is full of admirable suggestions, wise counsels, and profound reflections. It goes into the details of the physician's personal life in a way which is both instructive and inspiring. No small detail like the renting of an office or the purchase of an instrument is beneath notice, and those who court success may wisely follow its counsels. The present edition is known as the twentieth century edition. It contains much not included in former editions. While the authors say it is primarily intended for the young physician, the older members of the profession must not imagine they are out of range of its application and intent. This work will doubtless continue to enjoy the well merited popularity it has achieved in the past.

Book on the Physician Himself, and Things that Concern His Reputation and Success. By D. W. Cathell, M.D. The Twentieth Century Edition, Being the Eleventh Edition Revised and Enlarged by the Author and his Son, William T. Cathell, A.M., M.D. Pages 411. Royal Octavo, Extra Cloth, $2.50 net, delivered. Philadelphia: F. A. Davis Company.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Surgical Treatment of Cirrhosis of the Liver.

The following conclusions are reached by R. B. Greenough (*American Journal of the Medical Sciences,* December, 1902): (1) The condition known as biliary cirrhosis, with enlarged liver, jaundice, and fever, and without ascites, is accompanied in a certain proportion of cases by an infection of the bile-ducts. The drainage of the bile-ducts by cholecystostomy is a proper operation for the relief of this condition, when the evidence of infection is present and symptomatic treatment has failed to effect relief. (2) Of 105 cases of liver cirrhosis which presented the symptoms of ascites, 42 per cent were improved and 58 per cent not improved by Talma's operation or one of its modifications. The mortality within thirty days was 29.5 per cent. Nine cases were improved in health two years after the operation. (3) The nine cases of continued relief presented no marked differences from the general character of all the cases. (4) The cases in which the liver was enlarged gave a lower mortality and a higher percentage of improvement than cases of atrophic liver. (5) Cases of suture of the omentum between the layers of the abdominal wall gave a lower mortality and a slightly higher percentage of improvement than cases in which only peritoneal surfaces were brought in contact. (6) Drainage increases the danger of septic infection and peritonitis, and is to be avoided. If necessary, tapping may be done after the operation. (7) The presence of adhesions or perihepatitis is of good prognostic import as regards the success of the operation. (8) The number of tappings before the operation and the presence of edema of the feet and legs are of less prognostic importance than the general condition of the patient, the size of the liver, and the functional activity of the liver cells. (9) Talma's operation, or one of the modifications, is of proved benefit in a certain limited number of cases of liver cirrhosis, primarily for the relief of ascites, and secondarily for the relief of other symptoms of portal congestion. (10) The dangers attending the operation are mainly due to the weakened resistance of the patient rather than to the operation itself. The selection of cases suitable to operation demands more judgment than has been exercised hitherto. (11) The operation is not indicated in cases

of ascites due to causes other than cirrhosis of the liver. (12) The operation is contraindicated in the presence of renal or cardiac disease, and when good evidence does not exist that sufficient functional liver tissue remains to maintain life. It is also contraindicated when complications exist sufficient in themselves to make the result of operation uncertain.

Through-and-through Intestinal Suture.

F. G. Connell (*American Medical Journal,* Jan. 24, 1903) says that the suture that aims to include but a portion of the bowel wall is dangerous: (*a*) because it is liable to fail to include any of the submucosa, in consequence leaving a weak stitch; (*b*) because if including any of the submucosa it is almost certain to penetrate the coat, leaving a stitch open to the dangers of capillarity.

By utilizing a through-and-through suture the danger of yielding is excluded.

By employing a suture that is knotted in the lumen the danger of capillarity is diminished.

It is acknowledged that the most appropriate place for the knots when all coats are perforated is in the lumen of the bowel.

It is undeniable that when the submucosa has been perforated accidentally the knot ought to be placed inside.

It is also undeniable that many so-called Lembert stitches perforate the submucous coat (one-sixth of the thickness of the needle which is to "penetrate but not perforate" it). We are utterly unable to differentiate between a perforating and a non-perforating Lembert stitch.

The logical conclusion is that the ideal location for the last and all knots in an enterorrhaphy is outside of the peritoneal cavity, in the lumen of the bowel.

As a chain is no stronger than its weakest link, it is of practical import that the last one or two stitches be also perforating and knotted in the lumen.

The diaphragm by its valve-like action is of great value in the prevention of leakage.

The tying of the knot, according to the method described above, does not interfere with the establishment of firm union or tend to leakage.

The side knot, or "square stitch," in rendering a retaining suture unnecessary is superior to the top knot of the "circular" stitch.

The Prognosis of Tuberculous Peritonitis in Children.

In uncomplicated tuberculous peritonitis, according to G. A. Sutherland (*Medical Press,* Jan. 28, 1903), the prognosis is good.

When tuberculous pleurisy is present the prognosis is still favorable.

The prognosis is rendered less favorable in the case of (*a*) a strong family history of tuberculosis; (*b*) an infancy passed under bad hygienic and dietetic conditions; (*c*) a constitution of feeble resistant power; or (*d*) a history of severe infective illness in early life.

The prognosis is rendered less favorable in the presence of one or more of the following symptoms: continuous pyrexia, rapid wasting, persistent diarrhea, rapid pulse, and recurrent acute exacerbations.

The prognosis is rendered less favorable in the presence of one or more of the following local complications: (*a*) tuberculous ulceration of the bowel; (*b*) extensive caseation of the mesenteric glands or of tuberculous masses; (*c*) localized suppuration from infection through glands of the intestine; and (*d*) obstructive symptoms from bands of matting of the intestine.

The prognosis is bad in the case of the following complications: (*a*) the rupture of a suppurating gland or the perforation of an intestinal ulcer into the peritoneal cavity; (*b*) pulmonary tuberculosis; (*c*) tuberculous meningitis; and (*d*) general miliary tuberculosis.

In tuberculous peritonitis the prognosis is not appreciably affected by simple laparotomy.

Acute Circumscribed Edema.

In 1882 Quincke fully described acute circumscribed edema. It occurs as a circumscribed swelling of the skin and subcutaneous tissue, two to ten centimeters in diameter, the most frequent location being the skin about the joints of the extremities, the buttocks, and the face; the skin becoming paler or redder than normal. The mucous membranes are also affected. The swellings, which cause tension and itching, appear and disappear rapidly, but recur frequently. If the trachea or larynx is affected death may result from asphyxia. Dr. Mendel (*Berliner klin. Wochenschrift*) reports a case in a fourteen-year-old girl with a severe swelling of the left forearm and hand, the patient giving an interesting family history. In four generations of twelve people, nine were affected with this disease, six dying from asphyxia. The disease

seems to increase in its severity and frequency as the patient grows older. The author believes this condition to be due to an auto-intoxication, and that the regulation of intestinal activity would be of therapeutical importance.

MEDICINE.

A Study of the Deaths Occurring in New York City on the Opposite Sides of Twenty Streets.

A. E. Thayer (*New York Medical Journal*, Jan. 24, 1903) has from his observations upon this subject reached the following conclusions:

1. The mortality on the north side of any street in the district studied is liable to be higher than the mortality on the south side of the same street.

2. The higher northern mortality is due chiefly to three diseases: pneumonia, phthisis, and nephritis. The first two are especially fatal during cold weather, when the upper ventilation of living and sleeping rooms is most likely to be neglected; the third is also affected by lack of air and sunlight, both directly and also indirectly by the depression of mind consequent upon darkness and impure air.

3. On the south side the greater freedom from death from these causes is due chiefly to the advantages of sunlight and ventilation enjoyed.

4. The supply of air and sunlight has more effect upon the health of people living on the south side of the street and less upon the north, owing to the general habit of New Yorkers of living in the rear of the house—*i.e.*, in the more sunny and airy rooms upon the south side, and in the less sunny and airy upon the north.

5. Zymotic diseases appear to be independent of these conditions and may occur in excess upon the south side of the street; in such cases the mortality also may be higher on that side.

6. "Rear" houses are situated less favorably than single houses on a lot, because not only are they darker and less ventilated themselves, but they also deprive the other house of its proper light and air. This is applicable to the south side of the street; on the north side the house on the street acts as a "rear" house to the one behind it, by cutting off its light and air.

7. The width of the street and the distance across yards, measured from the back of one house to the back of another,

should be as nearly as possible the same—*i.e.,* the latter should never be less than the former; and the height of the dwelling-houses should bear some relation to these measurements, so that one house may not deprive another of its light and air.

8. In the case of contagious disease in any family, the importance of keeping the other children from school is closely related to the question of infant mortality below the age of five years.

9. In general, people should be urged to keep their windows open and their shades up as much as possible, and this is especially for dwellings on the north side of the streets and during the colder months of the year, when the ventilation is most neglected.

An Improved Method for the Microscopical Diagnosis of Intermittent Fever.

Ronald Ross (*Lancet,* Jan. 10, 1903) gives the following method: The finger is pricked with a lancet, and a large drop of blood, amounting to twenty cubic millimeters, is taken on the glass slide and spread out with the needle over an area the size of an ordinary cover-glass. It is then allowed to dry, and as soon as the film is perfectly dry a quantity of one-per-cent aqueous eosin solution sufficient to cover the film is laid upon it with a glass rod. This is allowed to remain on the film of blood for a period up to about a quarter of an hour, the period being inversely proportional to the strength of the staining solution. As the film of blood has not been fixed the solution of eosin will take out the hemoglobin of the dried corpuscles, and at the same time will stain the residual mass consisting of the stromata of the corpuscles, leucocytes, blood plates, and parasites. After the required time has elapsed the solution is washed off by a very gentle stream of water, and replaced by a weak solution of methylene blue, the same as is employed in the Romanowsky method. The blue is allowed to remain only a few seconds, the time being inversely proportional to the strength of the solution. Next, the blue is washed off very gently in its turn, and the specimen dried. It may be mounted in Canada balsam or water, or examined without a cover-glass by placing a drop of cedar oil directly upon the specimen. The specimen will contain no hemoglobin, and will consist only of the transparent stromata of the corpuscles, the leucocytes, blood plates, and parasites. Twenty times the amount of blood used in an ordinary preparation will be found disposed over the area covered by the cover-glass. If the Romanowsky stains are efficient, the smallest parasites will be found scattered over the field as small blue rings, with a crimson dot within or upon the

ring. If the preparation has not been overstained the pigment of pigmented parasites will also be visible.

Tea and Coffee Intoxication.

E. King (*American Medicine,* Jan. 31, 1903) states the physiologic action of caffeine and theine as follows: (1) They cause wakefulness, greater capacity for mental labor, and increased activity of thought by stimulation of the brain cells. Increase of the reflexes through stimulation of the spinal cord. (2) The heart's action is strengthened, being first slowed, and then becoming more rapid and irregular. This effect is likened to that of digitalis, but is more evanescent and also more rapid. It is generally conceded that this effect is due to stimulation of the medulla and not to direct action of the heart. (3) Diuresis occurs by direct stimulation of the secretory epithelium of the kidney, the solid as well as the liquid constituents of the urine being increased. (4) Theine is said by some authorities to have the following action in addition to the above: It causes a fall in body temperature, while caffeine causes a rise; its action is more marked on the sensory system, and caffeine on the motor system; it is a powerful local anesthetic and analgesic, while caffeine has no such effect. (5) The tannic acid exerts its well known astringent properties on the alimentary canal, and undoubtedly has an injurious effect on gastric and intestinal digestion through the formation of insoluble compounds. Consequently, when used to excess, the following reactions may be expected: Exhaustion of the brain from constant overstimulation, insomnia, vertigo, headache, neuralgia, flashes of light, mental dulness with exhaustion of mind, disinclination to work, and melancholia; increased and irregular heart action, ringing in the ears, muscular tremors; various forms of gastric and intestinal indigestion, with loss of appetite; diarrhea when using coffee, and constipation with alternating attacks of diarrhea when using tea; loss of bodily weight.

The Question of Bovine Tuberculosis to the Human.

Dr. Kohler (*Deutsche med. Wochenschrift,* 1902, No. 45), after weighing all the arguments for and against the transmission of tuberculosis, comes to the following conclusions: Up to the date of writing the differences between bovine and human tuberculosis and the question of transmissibility of bovine tuberculosis to man are still unsettled problems. In Germany the part

which meats play as carriers of tubercular infection has not been considered as important as that of the infection from man to man, although the regulations prohibiting their sale should still be enforced. The cooking of milk before use should always be carried out, the milk itself having been proved a good culture medium for many infections (typhoid, scarlet fever, thrush, etc.). With reference to the sale of tubercular meats, it is not likely that in the near future the attitude toward them will be at all changed. Their repulsive appearance and the fact that a tubercular organ has been removed would on their inspection condemn them. According to Koch every disease must be combated by its own peculiar method—cholera through the water, pestis through rats, smallpox by vaccination; in tuberculosis man himself, by the crowding together of the human race, presents the greatest danger. Kohler urges the necessity of caring for patients in a proper hygienic manner, and the instructing of the people regarding the true nature of the disease so as to gain them as coworkers to combat it.

Arguments for the Existence of a Separate Cortical Center for Writing.

At the recent meeting of the New York State Medical Society, Dr. H. C. Goodinier (*Medical Record,* Jan. 31, 1903) presented this paper.

He said that there are two principal views on this subject. The older one is that the focal cortical center for writing does not exist. The other view maintains that the act of writing is independent of the faculty of expression by articulate speech, and that when it is in abeyance it is because of the destruction of a cortical center probably situated at the base of the second left convolution. In support of this view the speaker said that sufficient pathological and clinical data exist to show the destruction of Broca's center does not necessarily cause agraphia. Trousseau has stated that the inability to write is in proportion to the inability to speak. To show the fallacy of Trousseau's reasoning, the author introduced citations from various clinical reports, including one made by Trousseau himself. Four cases were reported, the only ones known by him to exist in literature, in which there was motor agraphia and motor aphasia with a pathological lesion at the base of the second and third left frontal convolutions. Isolated motor agraphia, though very rare, certainly did occur. The author reported a case of his own, one of glioma at the base of the second left frontal convolution.

Leukemia and Miliary Tuberculosis.

H. Quincke (*Deutsches Archiv für klin. Med.*) observed two cases of splenomedullary leukemia and one of pseudoleukemia followed by miliary tuberculosis. After the tuberculosis set in the leukemic symptoms seemed to disappear, the spleen decreased in size, and the colorless elements of the blood became disintegrated, leaving the blood in a hydremic condition. It is likely that the tubercle bacilli, like other infectious agents, with the assistance of the body fluids, have a destructive action on the cells of the spleen and the blood, contrary to other infectious diseases which produce a hyperleucocytosis and swelling of the spleen. The author concludes that as tuberculin contains at least some of the toxins of the tubercle bacillus, it is probable that the use of tuberculin as a therapeutic agent may be of some value in inhibiting the overproduction of cells on the part of the lymph glands and the bone-marrow.

The Etiology of Endocarditis, with Especial Reference to Bacterial Agencies.

Endocarditis, according to S. Blum (*American Medicine,* Jan. 17, 1903), may be classified with reference to its etiology as follows:

1. Congenital and infantile endocarditis may be due to defective development, to reparative processes as suggested by Parrot, and other causes (unknown).

2. Endocarditis due to known bacterial agencies—*e.g.,* streptococcus, staphylococcus, tubercle bacilli, pyocyaneus bacillus.

3. Endocarditis of probable bacterial origin, associated with definite diseases presumably of a bacterial nature, but of which the bacterial agents are still undiscovered—*e.g.,* rheumatism, chorea, syphilis, exanthems, etc.

4. Endocarditis due to mechanical or chemical insults—*e.g.,* blows, strains, noxious excretory products in the blood, alcohol, atheroma.

The Origin of the Third Corpuscle.

Dr. Hirschfeldt (*Virchow's Archiv,* 166 Bd.), on examining pathological blood in which the number of blood plaques are increased, is of the following opinion: The blood plaques are undoubtedly originated from the erythrocytes, though only from a small quantity of them. They lie in the center of these cells, singly and in multiple, occupying the center of them. These

endoglobular plaques seldom leave the cell by more than one exit, thus becoming free in the blood. The occurrence of bodies simulating plaques and derived from leucocytes is rare in normal though frequent in leukemic blood. According to Deetjen the plaques consist of a nucleus surrounded by cytoplasm, possessing ameboid movement. He examined blood smeared on a thin film of agar, a certain amount of sodium chloride, dicalcic phosphate, and sodium metaphosphate being added. The latter possesses the property of preserving the life and motility of the plaques.

Circulatory Relations and Local Tuberculosis.

The fact that the introduction of the tubercle bacilli in the circulation will cause miliary tuberculosis at one time and a local tuberculosis at another is attributed to the varying virulence of the bacillus. Now the question arises, why do certain tissues become infected and others not? Friedlander (*Archiv für klin. Chirurgie,* Bd. 68, 1902) injected weak cultures of tubercle bacilli with an emulsion of lycopodium into the femoral artery. He succeeded in this way in producing a local tuberculosis in the structures which have a natural predisposition to the disease—*i.e.,* the epiphyses and the joint capsules. The vascular conditions of these tissues are characteristic, because of the sluggish capillary circulation and the thinness of the capillary wall.

THERAPEUTICS.

The Treatment of Leprosy.

Dr. Razlag (*American Medicine,* Feb. 7, 1903) says that first of all the baths are of great importance; he uses cold or warm baths of fresh water; also sea-water baths and medicated baths, with iodine, tannic acid, permanganate of potassium, liq. calcis sulph., just as the condition of the patient requires. As a sudorific, generally jaborandi, or simply strong coffee or tea. Wounds: Chloride or sulphate of zinc, hydrogen dioxide, ichthyol, chrysarobin, arsenic, tannic acid, tr. ferri chloridi, iodine, ol. gynocardiæ odor., zinci oxid., creosote, croton oil, salicylic acid, tr. iodine, sozoiodol, sodii, zinci and hydrargyri, permanganate of potassium, strychnine, tar, etc. Dressing with plain absorbent cotton, sometimes with xeroform powder, but never iodoform. It is necessary in the treatment of wounds to make some combination of the above mentioned drugs, especially in

the use of ointments, for which purpose the author generally prefers lanolin tar or glycerin. For the massage and friction of anesthetic skin, croton oil, strychnine sulphate, chaulmoogra oil, in combination with ol. olive, and sometimes pure mucuna pruriens. The edema can be well reduced by leeches, and he strongly recommends the use of these to a large extent; but great care must be taken how and where to apply them. Internally, liq. pot. arsenitis, or arsenic pills in combination with strychnine and ichthyol; sodii salicyl., ol. jecoris aselli, guaiacol, creosote, and sometimes airol seem to produce better effects than any other drug. The writer says he is well acquainted with the use of all the other drugs, as oils, ointments, and liquids, used externally or internally, but finally comes to the conclusion to keep on the above mentioned treatment. Care must be taken that the wounds heal slowly, as a quick closing of ulcers, etc., produces generally again the appearance of nodules as well as edemas. The patients must expose themselves as much as possible to the air, and be dressed only as much as will cover the body.

It will be necessary to adopt the beginning of the treatment exclusively by method, and nobody should be allowed to try any other treatment on the patients. It is necessary that every doctor shall get acquainted with this method of treatment if he attempts to treat lepers. It is also of great advantage to teach the improved lepers the treatment of wounds and bandaging, as they will thus, by helping the doctor, save a good deal of work. We must remember that no nation or race can be regarded as immune, and, apart from all theories, it is a fact that for everybody infection is dangerous. Hereditary leprosy counts no more than about one-eighth of the lepers; all the rest is a subjectively contracted disease. In the leper village Fat Fung Yum are 982 lepers, and of these there are only 106 cases of hereditary origin. A hereditary predisposition does not exist, as it is a clear fact that to such an infection a hereditary disposition is an empty theory and nonsense. In spite of what so many authors are writing about it, it is true that predisposition has a good deal to do with every kind of contagion or infection, but in this disease a hereditary predisposition is excluded.

The Treatment of Buboes that Threaten to Suppurate.

E. L. Sherman (*New York Medical Journal,* Feb. 7, 1903) says that a large percentage of buboes could be entirely prevented by the proper care of the concomitant genital lesion. Therefore

the prophylactic treatment is important. Any suppurative condition of the external genitals may cause an inguinal adenitis, but the most common cause is chancroids, and especially that class of cases in which the free discharge of pus from the ulcers is more or less obstructed, as by crusts, dry, adherent dressings, and phimosis. When a patient with any ulcerative lesion of the external genitals presents himself, the local treatment should be thorough and antiseptic. Scabs or crusts should be removed, the prepuce slit up if there is ulceration under it with phimosis, and measures taken to keep all ulcers clean and free from obstructive accumulations. In the case of chancroids, they may be cleansed with peroxide of hydrogen, dried with cotton, and the specific nature of the sores destroyed by the application of pure carbolic acid followed by nitric acid. The anesthetic effect of carbolic acid lessens the pain of the nitric acid application. A bit of cotton twisted tightly on the end of a match makes a good applicator for this procedure. Care should be taken that none of the acid touches the healthy skin or mucous membrane. Patients on whom this treatment is begun early have glandular involvement much less frequently than do those with neglected ulcerations. If one or more glands become inflamed or are already inflamed and threatening to suppurate when the patient is first seen, a saline laxative should be prescribed and the following ointment applied on lint, and over this a compress and a firm spica bandage.

℞ Ichthyol,
Mercurial ointment (50-per-cent),
Compound iodine ointment, equal parts.
M.

If practicable, the patient should go to bed and have an ice-bag placed over the dressing. If after twenty-four hours the inflammatory symptoms have improved or are stationary, this treatment may be continued. But if there is no improvement the patient will be saved much time and pain and probably an unsightly scar by an immediate excision of the inflamed glands. For this an anesthetic should be given and strict asepsis observed. The incision should be parallel with Poupart's ligament, and no longer than necessary for the removal of the inflamed gland or glands. They may be dissected out with blunt-pointed scissors, and the wound closed without drainage if no pus is present. If any pus is found, all broken-down tissue should be thoroughly curetted out and the wound lightly packed with sterile or bichloride gauze.

If, however, after twenty-four hours' local treatment, the

formation of pus seems inevitable and the patient declines an operation, pain may be somewhat relieved and suppuration hastened by warm mildly antiseptic applications, such as gauze compresses wrung out of hot bichloride of mercury solution, 1:5000 in strength, or sodium bisulphite solution, one ounce to a quart of water.

Suppurative Tonsillitis.

Every one knows how very distressing quinsy is, and those who suffer periodically from it are ready to appreciate any treatment that will abridge their torture. Up to the present and for ages past palliatives externally and local internal applications constituted about the limit of our therapeutics. Belladonna ointments and poultices externally, fumigations of the mucilaginous substances, painting the surface with cocaine (more or less dangerous) is the treatment generally prescribed, with salol or salicylate of soda given internally from the presumption that the painful affection is due to an arthritic diathesis. In spite of the intelligent combination of remedies and an earnest desire of the physicians to alleviate the suffering of the patient, the malady runs its course in nine days, and relief only comes when the abscess bursts of its own accord, or is opened by the lancet, an operation seldom performed and discountenanced by many surgeons.

However, it seems that the above routine treatment may be replaced by another much more active, and above all much more satisfactory to the suffering patient. According to Dr. Durand (*Medical Press,* Jan. 21, 1903), of Lyon, dried beer yeast, which has given good results in furunculosis, erysipelas, chronic bronchitis, pneumonia, etc., has an almost immediate effect on phlegmonous tonsillitis. He cites the case of a young girl, aged twenty-two, who each spring-time was seized with tonsillitis, ending always in suppuration. The beer yeast was given on the fourth day of the affection in doses of four teaspoonfuls a day. In a few hours the patient felt great relief, and finally got well after having simply expectorated a few drops of sanguineous pus.

MM. Toupet and Terry, of Paris, writing on the same subject, say that the employment of yeast suppresses in the space of ten or twelve hours pain in swallowing, and at the same time the distressing lancinating pains in the ears disappear. At the end of one or two days of the treatment the patient is able to continue his occupation, although the tonsil is still large, but not painful. The ordinary dose of the yeast is three teaspoonfuls daily.

Some Points Regarding the Treatment of the Functional Disorders of the Sexual Organs in the Male.

F. R. Sturgis (*Medical Record,* Jan. 31, 1903) considers in this paper the functional diseases leading to lack of sexual power in the male. In his opinion masturbation is a comparatively infrequent cause, although it plays a minor part in the causation of such disorders. A more important cause is "withdrawal" at the time of coition, because the congestion thus produced by erection and copulation are unsatisfied. Another cause is excessive sexual indulgence. He thinks that not more than fifty per cent of these cases are the result of a gonorrhea which has remained uncured. The physical cause in the gonorrheal cases is the presence of a urethral stricture, for experience has taught him that by removing the stricture the sexual debility is removed. A similar cause is the presence of granulations in the urethral canal, with or without congestion.

The key-note of the successful treatment of these cases is the use of sedatives. Medical men are exceedingly firm in the belief that remedies taken by the mouth are the only things of benefit. His own experience has taught him that this is a most fallacious belief. Medicines given internally are only useful as adjuvants; local remedies are what is required. There is nothing better than nitrate of silver, though the use of sounds and of hot and cold applications is beneficial. The use of sedatives is of far greater advantage than the use of stimulants. Nitrate of silver is more a sedative than an irritant in these cases. With regard to the treatment of sterility there is little to be said, for little can be done. Probably ninety per cent of the cases of sterility in the male are the result of disease of the epididymis, by which spermatozoa are not allowed to escape, although the usual quantity of semen is ejaculated. Electricity has proved disappointing in his hands, though weak galvanic currents are far better than the faradic current.

The Action of Atropine on Intestines.

Paul Ostermaier (*Münchener med. Wochenschrift,* 1902, No. 36) reports six cases of incarcerated hernia in which atropine was successfully used. Spontaneous reduction took place in four cases after the first, once after the second, and once after the third injection. The beneficial influence, both subjective and objective, was always evident after the first injection. The action of atropine is due, according to Kurt and Hagen, to a stimulation of

peristalsis, which occurs one to two minutes after injection, simultaneously with the contraction of the mesenteric vessels. The author believes that it is necessary to have a large amount of atropine circulating in the blood. The dose should be from one to five milligrammes or larger. It is advisable to inject from one to two milligrammes at intervals of half an hour until intestinal action is obtained, or toxic symptoms forbid further administration. The site of the injection seems to have no influence. The injection of five milligrammes the author believes to be too daring. Atropine stimulates peristalsis, relieves the contraction, and possesses a narcotic action, which relaxes the tension in the inguinal canal; the contraction of the mesenteric vessels relieves the engorgement so that the replacement of the gut is brought about. It is obvious that atropine with its mild action is preferable to energetic taxis. If a satisfactory result is not obtained in six to eight hours it is advisable to operate. Reduction *en masse* or of a gangrenous hernia cannot be brought about by atropine. Invagination and volvulus in the incarcerated intestines are reduced simultaneously with the hernia.

In conclusion the author recommends the use of atropine in place of taxis, but not to supplant herniotomy.

The Prevention of Typhoid Fever in Armies.

H. E. L. Carrey (*Lancet,* Dec. 29, 1902) thinks that typhoid fever might have been prevented to a great extent in the recent Boer war if the commanding generals had used better judgment in the selection of camp sites. The following conclusions are drawn:

(1) That unless all the water avenues to an army or camp have been protected it cannot be assumed that the incidence of typhoid fever is due to air-borne agencies. (2) That it is not possible to affirm that the water avenues to an army are closed unless the sterilization and distribution of the water are carried out by specially trained men. (3) That the evidence of air-borne typhoid fever is not clearly established in recorded Indian military experience. (4) That in South Africa and Egypt the evidence is opposed to this theory. South Africa is immensely in favor of the paramount importance of the water avenues, especially in the onset of epidemics, and that the spread of the disease by the subsidiary avenues—flies, dust, and contact—only becomes a factor of importance under conditions of the grossest neglect of sanitation. (5) That the evidence from Egypt proves that

the water avenues are powerless to originate and to spread epidemics of typhoid fever in large bodies of men.

The Use of Turpentine and Similar Remedies in Appendicitis.

M. Mayer (*Münchener med. Wochenschrift,* No. 32, 1902) believes that substances such as turpentine, which cause suppuration when injected subcutaneously, will when administered internally have a beneficial action on beginning suppuration or suppurative processes. It is known that the pus in small perityphlitic exudates becomes absorbed. Mayer used three drops two to four times a day with tincture of cinnamon, or as an egg emulsion per rectum when the former is not retained. On the occurrence of kidney disturbances or nausea the drug should be discontinued. The action of turpentine increases the peristaltic action; it also acts as an anodyne and facilitates the rapid absorption of the exudate.

The Importance of Cleansing Fruit Before Consumption.

Fruit being contaminated with bacteria through the media of street dust, handling with unclean hands, insects, etc., P. Ehrlich (*Archiv f. Hygiene,* 41 Bd., 2 H.) made the following examination: On his way to the polyclinic he bought grapes, which he then washed with water, injecting the washings into three guinea-pigs. The animals died after the lapse of seven to eight weeks of tuberculosis. He found on every 100 grammes of fruit (berries, prunes, pears, cherries, etc.) 400,000 to 12,000,000 bacteria, including the genus colon and proteus. It is therefore advisable to wash fresh fruit thoroughly in running water, a number of washings being necessary only for fruit that has been dried, owing to the tenacity with which the bacteria adhere, though too long a washing is deleterious to the flavor of many fruits. Pears and applies may be wiped off with a dry cloth before washing.

Aristoquin in Whooping-cough.

Aristoquin (aristochin; aristoquinine) is chemically diquinine carbonic ether. It occurs as a white, tasteless powder, insoluble in water, and containing about 96 per cent of quinine alkaloid. According to Dreser, aristoquin in solution does not irritate the gastric mucosa, is twice as powerful in destroying protozoa as quinine sulphate, and in general is less toxic.

Dr. H. Strusberg, of Bonn (*Münch. med. Woch.,* xlix, No. 45), has used this quinine derivative in eighteen cases of whooping-cough at the university medical clinic, the age of the patients ranging from five months to six years. Children under one year received 0.05 to 0.1 gramme (¾ to 1½ grains), older children up to 0.3 gramme (4½ grains), three times daily, with water. Vomiting or any other untoward effect was never noticed. As for the results, in about half the cases a decided effect was not obtained—partly ascribed to irregularity of administration; in the remainder the course of the disease was very favorable, the number of paroxysms materially diminishing.

The Treatment of Neuralgia.

At a recent meeting of the Paris Société Médicale, M. Marie (*Medical Press,* Dec. 31, 1902) related the results he obtained in a certain number of cases of neuralgia from subcutaneous injection of air, as recommended by M. Cordier, of Lyons. The treatment consists in injecting over the seat of pain half a liter of filtered air. In several cases of sciatica, and in one case of zona, the pain disappeared immediately. The speaker attributed the good effects of the injections to a kind of extension of the nerve extremities, and also to the formation of an air cushion, which protected the extremities against any external pressure.

M. Chauffard said that for a patient suffering from a pleuritic stitch which had resisted every treatment he recommended an injection of air. The result was immediate; the pain disappeared as soon as the air was injected under the skin.

OPHTHAMALOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

The Hereditary Influence in Nystagmus Remarkably Illustrated.

I. Frank (*Medical Record,* Jan. 31, 1903) reports the following interesting case of hereditary nystagmus: Mr. W—— had nystagmus. He married twice. By the first wife he had one daughter, now a Mrs. R——, who has fourteen children, one of whom has nystagmus. By the second wife he had five chil-

dren, as follows: Mr. M. W——, who has two children; Mrs. B. Z——, who has three children, one of whom has nystagmus; Mrs. B. A——, who has seven children, one of whom has nystagmus; Mrs. B. M——, who has three children, three of whom have nystagmus; Mrs. D. B——, who has nystagmus herself, has one child. Thus we see that Mr. D. W. W——, who had nystagmus, had one child and six grandchildren with the same affection.

The important and characteristic point is that a grandchild of the first wife and several grandchildren of the second wife show the hereditary influence; that is, the same father has transmitted the nystagmus, or rather the causative factor thereof, to the offspring of the two different mothers. While nystagmus is generally recognized as being hereditary—*i.e.,* in congenital cases—Frank can find no record of a case in which the transmission was through different parents; and for that reason this case is noteworthy.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

On the Labia Urethrae and Skene's Glands.

At a recent meeting of the Philadelphia Obstetrical Society, H. A. Kelly, of Baltimore (*Annals of Gynecology and Pediatry,* February, 1903), described a well defined important anatomical structure which has hitherto escaped the attention of clinicians. These labia consist, not in the rounded margins of the external urethral orifice which have been termed labia erroneously, but in well defined lips, or labia, which project from two to four millimeters beyond the external meatus, and by their mutual approximation cover and protect the orifice from the bacterial flora constantly bathing the vulva. If a tri-valve speculum is introduced into the vagina and the blades separated, the labia urethræ are also separated and the urethra is exposed.

They also exercise the physiological functions during coitus of protecting the urethral orifice. Sometimes these labia project beyond the urethral orifice on either side like long elephant ears, much more conspicuous relatively than the labia minora in relation to the vaginal outlet. Sometimes they are long and narrow.

In other instances one lip is long and the other short. The margin is generally an even one or slightly crenated. In one case a fimbriated margin was found. They disappear with age and with mechanical insults.

Skene's glands lie just within the urethra at the bases of these labia. The function of these glands is clearly to moisten the urethral labia, particularly during coitus during the violent displacement of the labia with the urethral orifice up into the vagina, when the labia urethræ need constant lubrication to obviate the injurious effects of attrition; in this way they occupy a position relative to the urethral orifice corresponding to Bartholin's glands in their relation to the vaginal orifice.

Their affections are catarrhal or gonorrheal. The speaker cited one case which was possibly a cyst of the left gland due to a closed duct.

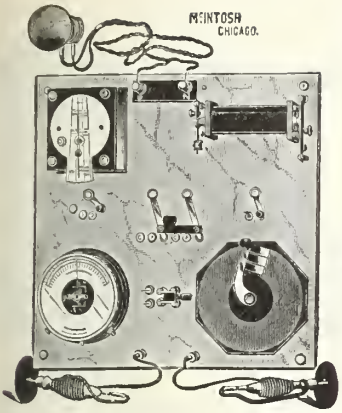
The Treatment of Eclampsia.

Dr. Maygrier (*Medical Press,* Jan. 28, 1903) says that formerly eclampsia was considered as a neurosis, but to-day is more rightly known as an autointoxication of the organism.

The first symptom being frequently albuminuria, it is necessary to place on milk diet every pregnant woman whose urine is albuminous, and enjoin rest in bed. This régime continued eight days places the patient beyond the reach of the malady. Once eclampsia is declared, the first thing to do is to remove from the organism the toxic principles and to calm the nervous excitability. The first indication is filled by bloodletting—from ten to twelve ounces should be taken as rapidly as possible. The writer is in the habit of injecting immediately afterward, hypodermically, an equivalent amount of artificial serum.

The agitation and excitability are best controlled by a few whiffs of chloroform and an enema of chloral. The Germans recommend morphine, but it should be used with caution.

Several authorities advise emptying the uterus with all possible celerity, but such is not his opinion, as the eclampsia will persist after delivery, and on the other hand the pregnancy could continue after the attack. Only two complications could warrant intervention—anuria or a rise in the temperature. Beyond those conditions the pregnancy should not be interrupted. But, on the other hand, if the labor has already set in, every means should be employed to deliver the mother as quickly as possible, forceps, version, or extraction, as the case might be.



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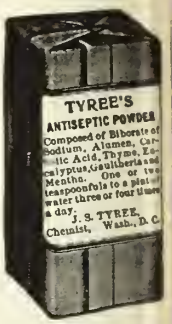
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This is all pure capital—you pay for no water.
You can take it with you—no liquids to carry.

J. S. TYREE, Chemist, WASHINGTON, D. C.

crucible of proper size and fused together with heat. The water of crystallization will be driven off, and the borax and alum will fuse together in a mass. When taken from the crucible it occurs in large lumps, which must be reduced to a powder by means of appropriate machinery. Then the powder is passed through sieves of graduated degrees of fineness, in order to get the desired fineness and a uniform degree of fineness. Then antiseptics and aromatics are added to the powder, the manipulations being done by appropriate machinery. When this is completed, we have "Tyree's Pulv. Antiseptic Comp.," or, for short, Tyree's Antiseptic Powder.

You see the impossibility of making this up as an extemporaneous prescription. You see, also, that to make it properly requires special apparatus, facilities, etc. Besides, it requires about five days to complete a "batch" of it. Even if your corner druggist was prepared to make it properly, your patient could not wait five days to have the prescription filled. So the proper thing to do is to get it from headquarters, or to have your druggist carry it in stock, in order to fill your prescriptions. When we realize that one ounce of the powder will make *a gallon* of standard antiseptic solution, we see that it is the cheapest antiseptic on the market. We would suggest to any physician who has not tested this preparation to do so either through his druggist or to write to Mr. Tyree at Washington, D. C. for a sample, which we understand he is supplying free of expense.

At last the Health Department of New York has brought to the attention of the medical profession through the daily press a forcible reminder of the wide-spread practice of substitution and of the adulteration of drugs. The medical profession has for years been thwarted in the greatest emergencies by the false values of the remedies furnished by their patients in their prescriptions. But the public has treated them with that tolerant, easy-going air of good-natured under-

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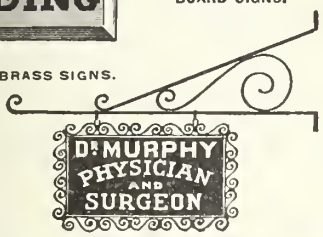

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anding, as though one should say, "It *is* ard to see another man getting one's rofits," and has given the warning no ore thought than would be bestowed pon a patent medicine vender's earnest lea to "Take no other," and "Beware f substitutions."

Commissioner Lederle has set in operation a wholesale examination of the stuff hat is commonly sold as phenacetine. His hysicians and staff have purchased phenacetine powders from 373 drug stores n Manhattan and Brooklyn. The official eport gives the names of all, and includes many well known drug stores, and department stores. *Among these samples, only 8 were found to be pure phenacetine, while the greater number, 315, were adulterated.* The chief adulterant was found o be acetanilid, selected undoubtedly because of its cheapness, and its similar ffects, in part, to phenacetine.

In the sale of an ordinary ten-grain ure phenacetine powder, the druggist nakes a little over 200 per cent. He buys ne phenacetine at $1.00 per ounce and

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retails it in small quantities at $3.20 per ounce. If his adulterant be acetanilid it is bought at the rate of 2½ cents an ounce, leaving him his sales almost clear. This mean and petty money traffic need not, however, be laid at the door of the retail druggist alone. It is important to lay the blame, however, where it is due, for the question is one with a double moral issue. The physician does not trouble himself about the druggist's profits

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or his sense of honor in dollars and cents; but he has his patient's health in his hands, and when he finds, if he ever does learn, that a cheap heart depressant such as acetanilid given in his prescription instead of the drug on whose certain action he is depending, he is justified in his honest indignation. — From the *Medical News,* Jan. 24, 1903.

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It's a wonderful laboratory, this human body. But it can't prevent the formation of deadly poisons within its very being. Indeed, the alimentary tract may be regarded as one great laboratory for the manufacture of dangerous substances. "Biliousness" is a forcible illustration of the formation and the absorption of poisons, due largely to an excessive proteid diet. The nervous symptoms of the dyspeptic are often but the physiological demonstrations of putrefactive alkaloids.

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FOR EXCHANGE.—Clinical Atlas of Skin Diseases, by Robt. W. Taylor, M.D.; Philadelphia: Lea Bros. Large colored plates, true to nature, with descriptive text. Half-morocco binding; cost $35. Will exchange for anything I can use: Small printing press, stereopticon, Ridpath's History of the World, or other books. Address, H. Erichsen, M.D., 240 Chandler Ave., Detroit, Mich.

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THE MEDICAL AGE

VOL. XXI. DETROIT, MARCH 10, 1903. NO. 5.

ORIGINAL CONTRIBUTIONS.

TREATMENT OF PNEUMONIA.

BY R. T. MORRIS, M.D., HOUSTON, TEX.

A review of a small part of the literature of the past one hundred years pertaining to this disease, and a comparative study of its mortality under different lines of treatment, warrant the statement that we do not possess a specific treatment; that in about eighty-eight per cent of the cases the tendency is toward recovery in spite of treatment.

The study of the rise and fall of specifics with this malady causes us to be skeptical of the peans of praise of the latest treatment.

I regret that in this paper I cannot advocate any special drug; I can only present the methods of administering the alleged specifics, permitting you to take your choice, fully realizing that the results in the end will be practically the same.

During the early years of the century just closed, when the germ theory of disease never entered into the dreams of the most visionary theorist, the following treatment was advocated:

1. General and local bleeding.
2. A brisk purge at the commencement; for instance:

℞ Hydrargyræ submuriatis .....gr. v.
Conservæ rosæ gallicæ .....gr. v.

Fiat pilula statim sumenda, superbibendo haustum sequentum.

℞ Potassæ tartratis .....3j.
Infusi sennæ .....3xv.
Syrupi auranti .....3j.

Fiat haustus.

When the violence of the febrile action is somewhat abated and pulse continues very frequent, digitalis is of great use; it may be added to the common saline draught; for instance:

℞ Liquoris ammoniæ acetatis .....3iij.
Tincturæ digitalis .....m. iv.
Syrupi rosæ .....3j.
Aquæ menthæ viridis .....3j.

Fiat haustus quartis horis sumendus.

3. The strength must be supported by farinaceous foods, mixed with mild and dilute wine; also camphor and carbonate of ammonia should be given.

The above extracts are presented so that we can more readily compare the treatment then with the treatment now, and can appreciate how insignificant the progress has been during that period.

The first alleged specific that will be presented for consideration is creosote. The champions of this drug are extremely enthusiastic and are very persistent, and if we did not recall similar claims made by the advocates of other specifics for pneumonia we would almost be persuaded. Unfortunately, the experience of the great body of the profession, as far as I can learn, differs from the experience of the apostles of creosote, who more especially are Van Zandt, Eberson, Gracey, Frieser, and Webber.

Beechwood, or carbonate of creosote, is more frequently given. Van Zandt administers the carbonate, seven and one-half grains in acacia every three hours; Webber gives four grains of the carbonate in gelatin capsules, ten or twelve capsules daily.

The effect of creosote in pneumonia as stated by a few is simply startling. Dr. Van Zandt is greatly disappointed if after the administration of the drug the patient is not dismissed by the third or fourth day. He treated sixteen cases during the winter of 1900 with no fatality, dismissing nine out of the sixteen cases before the end of the third day. He further states that creosote in acute pneumonia is one of the greatest life-saving discoveries of the century just closed.

Dr. Eberson used creosote in twenty-three cases and saw fever fall within twenty-four hours, with outbreak of sweat. He thinks that it cuts the disease short, and that resolution takes place rapidly and safely. The dose he recommends is about ninety grains per day. He mentions one case where on the second day there was no trace of fever, the child was playing, it was hungry and bright, and cough had ceased.

Unfortunately, neither Dr. Van Zandt nor Dr. Eberson give clinical histories, but only make general statements. However, Dr. L. Webber has presented tabulated cases with definite clinical histories, and I ask your indulgence while I analyze the same.

Case 1.—Patient admitted March 28, with fully developed

lobar pneumonia of left side; temperature 102.5°, pulse 112, respiration 40. Creosote given March 31, and during April 1 sixty grains were given, when temperature was 98°, pulse 96, and respiration 22.

The history does not show that the creosote had any specific effect. The patient was admitted on March 28, fully developed case; crisis occurred five days later, while no mention was made of the duration of the case previous to entrance.

Case 2.—This patient had la grippe three weeks before admission, which was on the 31st of March, when the temperature was 101.5°, pulse 90, respiration 28. Diagnosis, pneumonia of left lower lobe and part of upper lobe. Creosote was begun on April 1 and continued for ten days, when 600 grains had been administered. Temperature never rose above 99° after the first twenty-four hours. There is not the slightest evidence from this history that the disease was abridged, much less aborted.

Case 3.—Phthisis with pleurisy. This case has no bearing.

Case 4 died, and the writer innocently states that patient was much improved by creosote, but succumbed to degenerative myocarditis.

Case 5.—On April 4 patient had chill, followed by fever, with pain in right half of thorax; and on April 6 pleuropneumonia of moderate extent was discovered. Temperature 101°, pulse 98, and respiration 24. Here I wish to state that in my opinion a pleuropneumonia with a respiration of 24 per minute is extremely moderate; creosote carbonate, fifty or sixty grains daily, was given, after which temperature never rose above 99°.

Case 6.—Lobar pneumonia; admitted March 16; resolution occurred April 12. Creosote certainly did not hasten the crisis in this case.

Case 7.—Typical case of pneumonia; pain, fever, quick respiration, and rust-colored sputum. Pneumonia yielded to creosote in twenty-four hours, and patient was convalescent on fourth day. The history of this case is incomplete, inasmuch as there is no mention of duration previous to admission.

Case 8.—Lobar pneumonia existing two weeks before creosote was commenced. After eight days' administration lungs gradually cleared. No comments necessary.

Case 9.—Lobar pneumonia seen on third day; creosote, sixty grains per day, was commenced. Resolution was completed on the tenth day. No startling results from the creosote.

A careful consideration of the cases quoted does not justify the praise that has been showered upon this drug, and I agree with Billings when he says, "the high opinion of the drug is not

supported by sufficient clinical data to render it valuable." However, the drug is comparatively harmless, and a more extended experience should be accorded it.

Quinine has been extensively advocated by Aufrecht, Petzold, and others. Their method is to administer by the needle, during the active stage, one-half grain of the hydrochlorate, daily. Petzold's experience covers 261 cases, with a mortality of 8.8 per cent—a very low mortality. However, Peel presents statistics to show that to reach a true estimate of the effect of the treatment it should be compared year for year in different institutions on account of the varying mortality of the disease. Peel's mortality in his own hospital was 12.2 per cent.

Treatment with Antipneumococcic Serum.—This serum is anti-infectious—*i.e.,* the serum is produced by the injection of the living instead of the toxic products of bacteria. In the preparation the serum differs from the diphtheria antitoxin.

J. N. Snively analyzes 106 cases treated with the serum and draws the following conclusions:

First, the serum is harmless.

Secondly, its effect is favorable in early cases, and especially when there is no mixed infection.

G. E. Tyler reports six cases, and the only effect he noticed was a lessening of the dyspnea.

Sears reports twelve cases treated by this method. In his opinion the serum does not alter the course of the disease, and his experience is negative, and the extravagant claims made as to its special effect receive but little support from him. An extension of the process in three cases after its use was noted by him.

Many are very hopeful that ultimately an antipneumococcic or antistreptococcic serum will be made that will have a specific effect. When the infection becomes mixed and when we see so many varieties of the streptococci, the task is a herculean one in its difficulties.

Dry cold to the chest is only an adjunct to the symptomatic treatment, and it will meet with much opposition from the public because of a senseless prejudice. It is an antipyretic and an analgesic, and in my opinion will lessen congestion and subsequent consolidation. Cellers and Billinger consider dry cold to the chest to be a valuable addition to our general treatment. High temperature and not physical signs has been the indication for the application of ice, and lowered temperature and not physical signs has been the indication for its removal.

Saline Infusions.—This method was first recommended by

F. P. Henry, of Philadelphia, and in many cases will be of great benefit. Neuhoff in a recent contribution reports his experience with saline infusions in acute croupous pneumonia, and draws the following conclusions:

1. It is a useful adjunct to other treatment in selected cases.

2. It acts as a powerful heart stimulant when other heart remedies can no longer sustain a flagging circulation.

3. It increases secretion, moistens the throat, tongue, and skin, and lessens delirium.

4. It is contraindicated in pulmonary edema.

He injects subcutaneously, generally under the breast, a decinormal (six-per-cent) common salt solution, in quantity usually varying from one-half to one pint every six to twelve hours.

W. Evart and B. Percival, after using saline infusion in six cases, decided that there was no definite favorable influence upon the course of the disease.

In this résumé I have attempted, without prejudice, to place before you the different methods of combating this dreadful disease, hoping that we might be able to separate the chaff from the wheat, and agree upon some course that will lessen its mortality.

The treatment of one hundred years ago is still worthy of consideration. Expectant and symptomatic is all I can offer. Such treatment has been followed at the clinic at Bonn with a mortality of 7.97 per cent, figures which compare favorably with any other line of treatment.

In treating this disease I would suggest, not didactically however, the following:

Treat your patient, and your pneumonia incidentally. If the patient is strong and robust, depletion at the outset, calomel and soda five grains each, followed by magnesium sulphate, morphine to relieve pain, pleasant surroundings, equable temperature with an abundance of pure air, dry cold to chest to relieve temperature, followed by tepid bath if necessary. Beginning on second or third day, concentrated nourishment every three hours, day and night. Strychnine, digitalis, and whiskey if heart shows any indication of weakness, and if collapse is imminent use hot applications and saline infusions. If patient is of low resisting power, do not deplete, but support and nourish from the commencement. If patient is accustomed to his drink, continue it in increasing dose.

The treatment outlined will not cure all your pneumonia cases, but it will not obstruct the tendency of the disease, which is to recovery; and by pursuing such a course you can administer

wholesome nourishment, you can surround your patient with pure air, and can stimulate a flagging circulation. And when you have followed such a course you have done all that our present knowledge would warrant you in doing.

CORNEAL BURNS.

BY E. M. MARBOURG, M.D., PUEBLO, COLO.

Burns to the cornea, from whatever source, be they from acids, alkali, molten metal, hot air, or hot water, cause such instant and painful destruction of the corneal tissue that both present relief and prevention of further destruction of tissue demand our prompt and earnest efforts in these directions.

In many cases when first seen the eyelids are swollen and tightly closed, and efforts to open them cause increased pain to the patient.

In these cases, no matter what the variety or cause of burn, the lids should be slightly separated sufficiently to allow the point of a medicine dropper to be inserted, and the entire surface beneath the eyelids well flushed out with a four-per-cent solution of cocaine, or better, a two-per-cent solution of holocaine. By this means one not only anesthetizes the cornea and conjunctiva, but also washes out any particles of foreign material which may be present and loose, as well as diluting any acids or alkalies. The eye, now anesthetized, does not cause the patient so much pain during further manipulations.

But where the cause of the burn is known our primary action must be governed by the character of the escharotic. Where it is carbolic acid, an instant flushing with alcohol should be done, followed immediately by the cocaine or holocaine solution. These last solutions must be used liberally, both as anesthetizers and diluters of the alcohol used. Since alcohol itself will set up a violent conjunctivitis and cellulitis, where the other acids have caused the burn, a weak solution of bicarbonate of soda should be used, thus neutralizing the acid.

Lime is best combated by energetic flushings of weak vinegar, and this followed as before by cocaine or holocaine solution.

As soon as possible after the cornea has become insensitive it should be gone over carefully and all particles of foreign material removed by a spud. Any surrounding corneal tissue which shows evidence of an eschar should be unmolested at present, as the next step in the treatment will be directed toward its removal.

Molten metal and slag, when retained beneath the eyelids, cause the most profound destruction which we have to deal with in corneal burns, and the amount of destruction of tissue depends upon the size and duration of time the heated substance is kept in contact with the eye. In these cases, although the cornea may not have assumed a milkier hue than in the cases where the metal has struck the eye and been removed instantly, yet in a few days the cornea begins to break down and a general necrosis of it has begun. The prognosis in these cases is always grave, although the first appearances are the reverse.

One of the more common burns from hot iron is the accidental striking of the cornea by a hot curling-iron slipping from "my lady's" fingers. A deep, white line is seen where the curling iron has seared its way across the cornea, and at first sight the transparency of the cornea seems irrevocably damaged. Superheated air seems to act upon the cornea, not over its entire surface, but in an irregular manner, some sections being more deeply burned than others.

The after-treatment, or rather the treatment following the removal of any offending substance or its neutralization, is that of the instillation every half-hour of olive oil, preferably the heavy green oil. Nature almost immediately forms a line of demarcation between the destroyed and normal tissue. The olive oil, possibly on account of its specific gravity or other element in it, gradually insinuates itself beneath the burned tissue, and as it does so also protects the living tissue beneath.

In the case of curling-iron burns or similar ones in character, the eschar is seen to be gradually stripped from its resting-place and transparent corneal tissue left beneath. This action only takes a few hours, and if there is much pain a small percentage of cocaine and atropine sulphate may be added to the oil.

In about twenty-four hours after the initial use of the olive oil it should be discontinued, and a mild europhen or aristol ointment substituted until the eye has recovered.

Owing to the dissecting action of the olive oil, as was mentioned before, curetting of necrosed tissue is not practiced, since the oil protects the normal corneal tissue exactly in the proportion with which it lossens the necrotic tissue, thus preventing any infection.

In hot-air burns the oil and atropine should be kept up for some days, since the necrotic tissue and subsequent ulceration is much slower in assuming its limitations.

And now that one has done all this, still there remains a leukoma or a nebula, showing that we are not through with the case.

Thiosinamine lends us its aid, although three months' constant use must elapse before we may expect any appreciable absorption. Three grains once daily kept up for at least three months seems to give the best results, and when this is done you feel that the best results under the conditions have been accomplished.

NERVOUS AND MENTAL PHENOMENA OF ARTERIOCAPILLARY FIBROSIS AND ATHEROMA.

BY J. E. COURTNEY, M.D., DENVER, COLO.

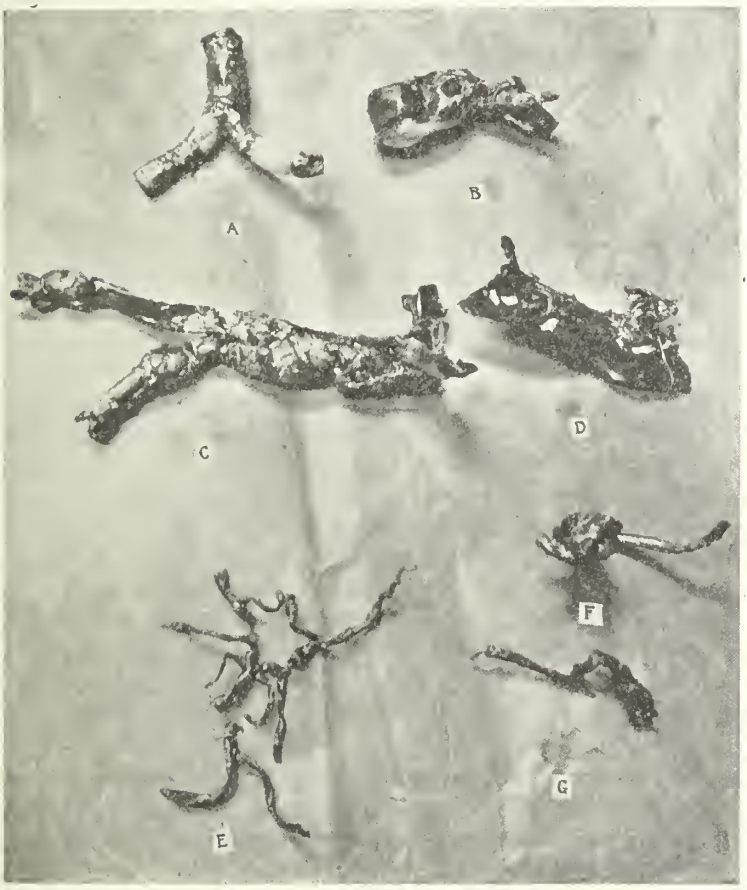
It certainly appears that in recent years the changes in the capillaries and arteries, beginning in irritation and leading to severe sclerosis, ending in atheroma, if the subjects survive long enough, are seen much more frequently and earlier in life than formerly. It does not seem possible that the much more frequent finding of the condition and larger literature of the subject are due wholly to our superior observation of these states. It must actually be that men are wearing out their vessels sooner by lives of hypertension. This is largely explained by the rush and tension, physical and psychical, of modern life, and the added tax and irritation thereby imposed on the vascular system, especially the vessels of the heart, the kidneys, and the brain.

The injury is partly mechanical, prolonged overstrain, and partly metabolic and toxic, and affects particularly the endothelial lining and elastic coats of the vessels. The distribution of nutrient material and elimination of effete are not normally accomplished. The sequence of events is overdistention, impaired elasticity, obtunding of the vasomotor centers in the arterial coats, paresis, stasis, congestion, perhaps a subacute inflammatory state, hyperplasia, and finally deposits of fat and then lime replace the inner or middle coats or both. The three chief poisons which act as causative agents are those of alcohol, rheumatism, and syphilis, the latter having a predilection for the arch of the aorta, the circle of Willis, and the meningeals and cerebrals. The condition may be general or quite limited to any one of these localities.

The gouty-ruddy and the pallid nervous, other things being equal, seem most liable to the trouble. The disease is often a primary condition, a clinical entity, presenting a definite and diagnosable picture. While text-books treat separately fibrosis and atheroma, it seems that the latter is but the terminal stage of the other, that the same causes operate to produce these stages of one pathological process. Degeneration and deposits take

place where strain is greatest, more decidedly in tortuosities, at the bifurcation of vessels, at the sphincter-like entrance to vessels, offering here a nidus for the formation of thrombi, or becoming detached as emboli.

I beg to exhibit specimens from autopsies on persons who suffered from nervous and mental disorders; while illustrating extreme degrees of atheroma and contributing largely to cause



death in the subjects from which taken, they are suggestive of the grave injuries to organs which must have been going on for years before death. It is impossible to say whether this state was initiated by an acute arteritis not recognized or lost sight of as time went on, or whether it was a subchronic and slowly progressing state; certainly it was the leading pathological state and explained the nervous and mental phenomena present, as well as the cause of death in these cases.

It is a long time and a long way from the alteration of the lumen of a vessel which disorders the more sensitive and vulnerable cerebrospinal centers to the obstruction which causes gangrene, and for years before altered elasticity or slightly altered lumen may have seriously affected those numerous subtle osmotic processes which we call collectively metabolism.

I am convinced from the findings of many autopsies that chronic Bright's disease, melancholy, hypochondria, premature physical and psychical decay, are most frequently the direct result of changes in the nephritic and cerebral nutrition caused by this degeneration, even in its early stages of impaired elasticity. The condition when established is likely to cause such nervous symptoms as vertigo, insomnia, neurasthenia, irritability, some degree of amnesia or dementia, sudden, short, partial or complete losses of consciousness, slight aphasia, arrhythmia and dyslexia or hemianopsia, and intermittence of the pulse, pseudo or true apoplexy, angina pectoris, and sudden death from plugging of a coronary or bursting of a cerebral artery. In the presenile, in melancholia with hypochondria after thirty-five, it is rare to do an autopsy and not find atheromatous change in some degree, particularly at the base of the brain. Many of the nervous disorders we have called functional, trophic, and vasomotor may come in time to be regarded as due to this condition and reverse our views as to cause and effect, stamping the disease as organic. It is to be borne in mind that central atheroma of the larger vessels may be the cause of vasomotor spasms of smaller peripheral ones.

Opinion is shifting from the view that sclerosed kidneys cause atheroma, to the view that the fibrosed artery oftener causes the sclerosed kidney. The effect on the brain of renal inadequacy is attracting just attention as a cause of hysterical attacks, mania and melancholia. Arterial degeneration, renal cirrhosis, mental failure, and the post-mortem findings of opaque or adherent dura are frequent associations, and more and more is it noted how often bulbar and other basal cerebral troubles depend on atheroma.

There is a recognizable symptom-complex, indicative of atheroma of the basilar and other cerebral vessels, and prodromal of apoplexy; cerebral shocks from change in the lumen of a vessel, the formation of a chalky nodule or a minute dilatation at a weak spot, slight hemiplegic attacks with short or no loss of consciousness, a unilateral numbness or weakness, vertigo, etc.

To cite an illustrative case: The middle of April last Mrs. F. W. B—— presented herself at the clinic for nervous diseases,

University of Denver, and gave the following history: "I am fifty-five, widow, retired nurse; passed change of life six years ago; my father and mother lived to good age. The only disease I have suffered from was rheumatism. For the last two years I seem to have failed in strength; two months ago I had numbness in my left thumb and first finger; a few days later I awoke one morning weak; felt like falling to the left; there was a tingling in my tongue and face on the left. For three days I could not talk well; for a while my son had to assist me at things. I had a little swelling of my feet; the left worse, and it felt pricky and cold to touch. I am nervous; any little thing will make me cry. I have a weak feeling about the heart, and dizziness when I stoop. My sleep and appetite are rather poor; when alone I feel uneasy and depressed." Examinations of the urine were negative; some accentuation of the aortic second sound, no edema, no arcus senilis, but radials and temporals a trifle hard; her symptoms were attributed to atheroma of cerebral vessels, with liability to a cerebral hemorrhage; she attends the clinic occasionally, and is on diet of milk, cereals, and vegetables; she has taken small doses of iodide of sodium and nitroglycerin.

How often are we told after a fatal or disabling cerebral hemorrhage that there had been for long dizziness when stooping, slight amnesia, flushing of face, etc., which failed to impress patient or family.

Many cases of dementia and of epilepsy in persons in advanced life depend on circumscribed softenings or cicatrices after thrombic or embolic injuries, slight enough to escape notice, or long enough ago to have been lost sight of as a possible cause. The condition described by Erb and Charcot and called intermittent claudication or angina cruris, consisting of cramps, rheumatoid pains, tingling and weakness of the leg, and limping following slight exertion, and relieved by rest, elevation, and gentle friction, is now admitted to be not spinal, but failure of adequate blood-supply from atheroma of the abdominal aorta or the iliacs. In the latter case the symptoms may be unilateral.

The related conditions of Mitchell's red-neuralgia, erythromelalgia, Raynaud's superficial gangrene, and the attacks of sudden failure of the muscles of the legs and back called astasia-abasia, are often dependent upon similar causes. The early diagnosis of atheroma is important; not only does it make clear obscure nervous symptoms, but anticipates by prognosis or delays by management and treatment the disabling or fatal hemorrhage. Important medicolegal questions may arise as to the responsibility for moral and intellectual lapses, testamentary capacity,

etc., of persons in whom this condition of the cerebral vessels existed.

Apart from the nervous and mental symptoms enumerated, high tension, which can be felt by the finger or shown by the sphygmograph, and a lowering of the point of the greatest intensity of the aortic second sound posteriorly, from the curve of the spine of the scapula to a line from the lower angle of the scapula to the second dorsal vertebra, are the admitted points in diagnosis.

CHLOROFORM ANESTHESIA.*

BY E. T. DUKE, M.D., CUMBERLAND, MD.,

At the risk of repeating an old story I have selected for my subject chloroform anesthesia, with the hope of provoking a full and free discussion of anesthetics. Since beginning the study of medicine I have spent much of my time administering anesthetics, and am convinced chloroform has been made to suffer unjustly as an anesthetic for want of care in its administration, and for lack of appreciation of its power for good. If the element of time in operating is not to be considered, and patients are to be kept under the influence of the anesthetic for hours, chloroform is of course inadmissible. But the best surgeons of to-day, with possibly a few exceptions, are operating quickly, hence the question of time will not be as important a factor as formerly. In those cases requiring prolonged anesthesia, ether or a combination of chloroform and ether is to be preferred. In all other cases chloroform is best. As we come to realize that chloroform when it does kill does so rapidly, and endeavor by watchfulness to prevent this result, we have learned the first and most important lesson. Death may occur unexpectedly as a result of the anesthetic. In most instances it may be averted by care in the administration.

The substitution of ether for chloroform has been due in a measure at least to the fact that patients do not die so suddenly under its influence, but after being removed from the operating room; and to the further fact that inexperienced persons can administer it with less danger. Whilst admitting these facts I submit that chloroform when carefully given will not result in any more fatalities than ether. Dr. Chisholm, of Baltimore, had no death in ten thousand, and Dr. Carnochen, of New York, none in twelve thousand cases, showing positively it may be given

*Read at a meeting of the Tri-State Medical Association of Western Maryland, Pennsylvania, and West Virginia.

without fatal results when two rules are observed—care in administration, and rapidity in operation.

Chloroform anesthesia should be commenced very slowly, and the patient watched with the greatest care. I have sometimes found it necessary to discontinue in the early stage, and thereby saved the patient by the gradual method. It is the practice of some physicians to give chloroform rapidly and induce anesthesia in a short time. Whilst this method is easier it is certainly attended with greater danger. The amount of chloroform required to induce anesthesia differs greatly with individuals, hence the need of going slowly. A very little of the anesthetic may be necessary to maintain the desired state of anesthesia if the patient be watched carefully. A great surgeon once said: "I don't want the patient to kick, but better kick than die." It is very difficult to determine in every fatal case whether death was due to the anesthetic or some other cause. The innocent vapor may be the scapegoat for carelessness. Shock kills so often and so quickly that death due to this cause may be credited to chloroform. I have in mind a patient to whom I gave chloroform for the operation of version with satisfactory result and prompt recovery. Two months afterward she died in a dental chair when the same anesthetic was given for the extraction of a tooth, death being due no doubt to shock.

Many considerations enter into the choice of an anesthetic. To give exclusively one or the other is certainly not wise. Because ether has been adopted by some of the largest hospitals and used exclusively does not appeal to the broad-minded physician or surgeon. The same exclusiveness in other departments of medicine would reflect greatly upon the profession. A study of the heart, lungs, and kidneys of the patient should precede a choice of an anesthetic.

Infants and children take chloroform well. One precaution is necessary: see that the air-passages are free. When respiration is impeded too much of the vapor may be retained in the lungs and serious results follow. One such case has warned me to be more careful in this regard. Valvular murmurs of the heart are no contraindication to the use of chloroform. Weak heart action necessitates a combination of ether.

The force necessary in giving ether with the dread of its choking sensation may be avoided in using chloroform. Especially is this the case in children.

Nausea, vomiting, oversecretion of mucus, so marked in the use of ether, are absent in the vast majority of chloroform administrations. Particularly is this true when morphine hypo-

dermically precedes the anesthetic and no food is given by mouth for several hours. The after-effects of ether are certainly more harmful than those of chloroform. Pneumonia, bronchitis, and inflammation of kidneys are apt to follow the administration of ether. Experiments conducted by Büdinger to determine how long chloroform and ether were in being excreted have shown that they were present in exhalations four days after their administration. The vapor is held by mucus in nasal, throat, and bronchial passages, and given off gradually; the large extent of surface involved showing the need of care after the discontinuance of the administration of the anesthetic, as a certain amount is absorbed from that retained in the air-passages.

Where chloroform is inadmissible, a mixture of one part alcohol, two of chloroform, and three of ether, I have found the best substitute.

In closing, the point I wish to make is that by care in its administration chloroform may be given with as few deaths as ether.

A BILL has been introduced in the Pennsylvania legislature providing that "No person shall enter upon or continue in the practice of medicine or surgery in the State of Pennsylvania (or enter upon or continue in the profession or occupation of the treatment of patients or persons for disease or injury by the use of any medicine or by the use of any other means or agency whatsoever, either for valuable consideration or without any charge or remuneration therefor) unless he or she shall have complied with the provisions of this act," namely, that of May 18, 1893, relative to the examining and licensing of practitioners of medicine and surgery, "and shall have exhibited to the Prothonotary of the Court of Common Pleas of the county in which he or she desires to practice medicine or surgery (or to engage in the profession or occupation of the treatment of persons for disease or injury) a license duly granted to him or her as hereinbefore provided, whereupon he or she shall, upon the payment of one dollar, be duly registered in the office of the Prothonotary of the Court of Common Pleas in the said county; and any person violating any of the provisions of this act shall be guilty of a misdemeanor, and upon conviction thereof in the Court of Quarter Sessions of the county wherein the offense shall have been committed shall pay a fine not less than $200 nor more than $500 for each offense, and undergo an imprisonment of not less than six months in the county jail. Provided, however, that this act shall not apply to professional nurses in the prosecution of the profession."

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE ENDOWMENT OF RESEARCH.

It is refreshing to find that Mr. Rockefeller, of Standard Oil notoriety, does not confine his diversions to epistolary indiscretions. His philanthropic aspirations are not to be entirely satisfied by bequeathing to posterity the indisputable blessings that he conceives to proceed from the creation and preservation of a great trust. He is, as he should be, a great believer in the universal efficacy of patience and cheap oil. Having devoted such portion of his life as the pangs of intestinal indigestion will permit him to the achievement of one great life purpose, the supplying of cheap oil, he now proposes to endow human patience with a modicum of his oil profits. To accomplish this high mission he has largely augmented the scope of the Rockefeller Institute. As originally established the institute had no home of its own, but utilized its endowment for the purpose of subsidizing research by means of various scholarships, and research work was by these means conducted at some twenty home and foreign universities. New York has now been selected as the permanent headquarters of the institute, and its usefulness will be much increased, and the scope of its operations much enlarged.

The plans of the directors contemplate the immediate erection of a single laboratory in which will be provided an equipment for investigations in physiological chemistry, hygiene and preventive medicine, pharmacology and therapeutics, normal and pathological physiology, and the study of microörganisms. The institute will also assume the publication of the *Journal of Experimental Medicine* established some time ago by Dr. Welch of the Johns Hopkins University. The idea which dominates the directors is to extend the influence of the institute by means of lectures and publications, and later to provide accommodations for a limited number of patients on whom newly discovered facts

may be made operative. In fact, a large and unlimited future is opening for the institute.

The inherent wisdom of a scheme of this kind is beyond all praise. It means a return to the people of the wealth they have been instrumental in producing in a higher and better form. It is returning gold for silver. Mr. Rockefeller appears in the character of the fakir who went abroad selling new lamps for old ones. Standard oil comes back as an intellectual illumination. The patience and exactitude of the laboratory man will find the means whereby they can continue—and patience and cheap oil will conquer all, or at least some, of the many affections of mankind.

There may have been those who have arrogated to themselves the divine prerogatives of judgment. Let them pause before they condemn. Let them contemplate the untold blessings likely to proceed from such a utilization of wealth, and let them encourage by their sympathy practical philanthropy of this kind.

EDITORIAL NOTES.

Intravenous Injections of Formalin in Septicemia.

Recently a great deal of publicity has been given by the lay press to a case of puerperal septicemia which recovered immediately after an intravenous injection of a solution of formic aldehyde. The patient, a negress aged twenty-six, was admitted to Bellevue Hospital on December 21, 1902. She was in labor at the time of admission to the hospital, and on the day following was delivered of a six-months-old fetus in a macerated condition. Septic infection, which had set in before delivery, became worse soon after. She was given the usual antiseptic intrauterine douches, despite which her temperature on the evening of the delivery rose to 105°. The following day she was curetted, and a large amount of decomposed membranes and placental tissues removed. Examination of the blood showed pure cultures of streptococcus. She was then given an intravenous infusion of 500 cubic centimeters of a 1-to-5000 solution of formalin. In a few hours her temperature fell to 101°, respiration 28, pulse 104. Her temperature remained at this point for three hours, then rose to 103°, pulse 120. It remained at 103° for three hours, when it came down until in three hours the temperature by the rectum was only 95°. The pulse had then fallen to 86 and the respiration to 22. In twelve hours the temperature had reached 102° and the pulse 110. It then fell to normal, but rapidly rose to

103°, although the pulse did not go higher than 112. Although the second blood culture had been taken, there had not been time for a report, so it was decided to give her a second infusion, 750 cubic centimeters of the same solution being then given her. There was a slight chill without a further rise of temperature, which in the course of twelve hours fell to normal. At the time the case was reported the patient was up and about, and apparently well. Cultures made subsequent to the first formalin injection were all free from streptococci.

Whether or not this case deserves the attention it has drawn is a question, for almost every practitioner has at some time or other seen apparently hopeless cases of puerperal septicemia recover spontaneously. As yet insufficient data are at hand to prove whether we have in formic aldehyde an agent of much usefulness in such desperate conditions.

Ambulance Cars on Railroads.

Quite recently the German State Railway administration has decided to maintain ambulance cars at seventy of the principal stations throughout that country. Full hospital equipment will be found in each of these cars, including operating tables and beds. The cars will be in charge of a physician who will instruct all the employees of the railway in the performance of first-aid duties. This idea is an excellent one, and should be adopted by the various railway systems of this country. It would relieve much unnecessary suffering, and be the means of saving many lives that heretofore have been lost, owing to the inability to get medical aid to the scene of disaster as promptly as could be wished for.

The Trendelenburg Position for Seasickness.

The Trendelenburg position is scarcely a graceful one, and does not exactly lend itself to purposes of polite society; but a French journal advocates its adoption as a prophylactic against seasickness. The writer found he was able to make voyages of considerable length in this position. The deck of an ocean liner would present an unusual appearance if all those threatened with this malady were to be found adopting this position. The steamer-chair would have to be constructed on a new plan.

ITEMS AND NOTES.

THE dengue epidemic in Honolulu is causing much suffering.

A NEW publication entitled the *Bio-chemical Journal* has appeared in Berlin.

THE epidemic of smallpox in Galt, Ont., is now said to be practically at an end.

A FAMINE in Dalmatia and an epidemic of typhoid fever are causing great loss of life.

THE United States quarantine office at Manila has reported that port free from cholera.

$50,000 has been contributed by the Coats family to the English cancer research fund.

THE plague in Mazatlan is still raging, several deaths from the disease being recorded daily.

A SOCIETY has been organized in Munich for the purpose of the prevention of the spread of venereal diseases.

THE temporary Phipps Institute for Cure and Prevention of Tuberculosis, at Philadelphia, has begun active work.

ACCORDING to press reports, Henry Phipps donated $100,000 to establish a laboratory and Pasteur institute in India.

THE authorities of the Carnegie Institute have just awarded five grants to the Johns Hopkins University for research work.

SEVEN medical school inspectors of the New York Board of Health were recently dismissed for falsifying their vaccination reports.

AN epidemic of typhoid fever has made its appearance in Ithaca, and has attacked a great many of the students of Cornell University located there.

THE proposition is now before Congress to enlarge the Army Hospital at Fort Bayard in order to accommodate tuberculous patients from the navy.

THE prevalence of smallpox in the coke region has induced the C. Frederick Coke Company to issue an order stating that they will vaccinate without charge all employees and their families.

THE Eleventh International Congress of Hygiene and Demography will be held in Brussels from September 2 to 8, 1903. The secretary-general of the Congress is Dr. F. Putzeys, of Brussels.

THE exposition of appliances of medical instruction which was held in Berlin last year proved to be such a success that the projectors are organizing a collection as a museum; also a loaning on demand.

PLANS are now being prepared for the instruction of officers of the medical branch of the National Guard in the Army Medical School in Washington. This school was established in June, 1893, with five newly commissioned assistant surgeons.

MR. T. S. TIMMIS has given the sum of $50,000 for the systematic investigation of the origin and cure of cancer. The investigations will be carried on at the Liverpool Royal Infirmary and in the new laboratories of experimental medicine in University College, Liverpool.—*Exchange.*

THE title of doctor was, according to the *Journal Médical de Bruxelles* for December 31, 1902, for the first time made and conferred in the twelfth century by the University of Bologna. The first doctor of medicine was Gulielmus Gordinio, who was invested with the dignity by the College of Aosta, in 1220.

THE Craig Colony prize of $200, annually given by Dr. Frederick Peterson for the best original essay of the etiology and pathology in the treatment of epilepsy, was awarded to Dr. Julius Donarth, of Budapest, Hungary, for his paper on "The presence of cholin in epilepsy and its significance in the production of the convulsive attack."

A PRIZE of $75 offered by Unna for the best work on the coccus found in eczema with discharge was not awarded in 1902. The sum is therefore doubled, and further competition invited. The coccus is the diclimactericus albus flavens (typus Traubel), and it must be studied in comparison with the pyogenic staphylococci. Articles must be sealed and received by Leopold Voss, Hohe Bleichen 34, Hamburg, before December, 1903.—*Exchange.*

Dr. Marmorek, of the Paris Pasteur Institute, is said to have succeeded in elaborating a tuberculosis serum of the efficacy of which he has satisfied himself. A report will soon be made by him to the Paris Academy of Science. Nine months is said to have elapsed since Marmorek obtained his serum, but he has kept back his results for confirmatory investigations. It is to be hoped that he will be allowed to bring the matter forward in his own way and time, so that some rational scientific opinion of its value may be had before it is damaged by hysterical press heralding.—*New York Medical Journal.*

The Board of Health intends to proceed against 315 druggists of the boroughs of Manhattan and Brooklyn who, the inspectors have discovered, are in the habit of selling adulterated phenacetine. It was discovered a short time ago that a phenacetine powder bought in a drug store was adulterated, and from this arose the suspicion that other druggists might be doing the same thing. Therefore a force of inspectors was sent out to visit drug stores in the two boroughs. Of 373 samples obtained, 315 of the powders were found to be impure. In some cases the powders contained no phenacetine at all.

A polyclinic was opened last month in one of the densely populated quarters of Paris. The money for its construction, says the *Journal of the American Medical Association,* was furnished by Dr. H. de Rothschild, a member of the wealthy family bearing that name. The important specialties will each have a special section, such as ophthalmology, laryngology, orthopedic surgery, and radiography. Attached to the establishment is a large library of 10,000 volumes, chiefly concerning children's diseases. The inauguration ceremonies were carried on with some *éclat,* the minister of the interior, M. Chaumie, being present.

A public school-teacher of Chicago has been barred from her schoolroom by the board of education, on the recommendation of the city superintendent, because it is believed that she has advanced pulmonary tuberculosis. The teacher is a Christian scientist, and asserts that she has no disease, though she is being treated by a Christian science healer. Medical members of the Board of Trustees have been appointed a committee to draw up appropriate resolutions to be adopted by the board requiring all teachers suspected to be suffering from tuberculosis or other infectious diseases to submit to medical examinations by the board's physicians before continuing their school work.—*American Medicine.*

THE first award of diplomas of proficiency to students of the French Institute of Colonial Medicine was recently made in Paris in the presence of a number of academic and colonial notabilities. Professor Brouardel, honorary dean of the Paris Faculty of Medicine and director of the Institute, delivered an address, explaining the object and aims of the Institute and emphasizing its practical usefulness. He laid stress on the fact that the establishment of the Institute was not intended to be in rivalry with the teaching on tropical diseases given at Marseilles and Bordeaux. He thanked the Union Coloniale, the Association des Dames Francaises, and other societies which had helped on the foundation of the Institute, and M. Doumer, who had allocated 30,000 francs from the budget of Indo-China for its support.

A BILL has been introduced into the Pennsylvania legislature which provides, according to *American Medicine,* that any and all proprietary or patent medicines prepared, sold, or offered for sale in Pennsylvania shall contain upon the label a true and correct copy of the formula, ingredients or constituents of the same, together with a true and correct printed statement in English of the several and respective quantities or proportions thereof. No person shall be employed or engaged in the manufacture and the mixture, compounding, or preparation of any proprietary or patent medicine who is not a regular graduate in pharmacy and so registered under the laws of the State. Persons violating this act are liable to a fine of $1000 or imprisonment for one year, or both, one-half the fine to go to the person furnishing the information.

THE Spanish law of September 9, 1857, gave to the government, acting on the advice of the Council of Public Instruction, power to recognize medical studies pursued abroad, and to grant to persons holding a regular diploma obtained in another country the temporary right of practicing medicine in Spain. On the downfall of Queen Isabella a more liberal spirit prevailed, and on February 6, 1869, Senor Zorilla issued a decree declaring that foreign degrees should be held as equivalent to Spanish, and granting foreign doctors the right to practice in Spain on production of their diplomas and payment of 500 pesetas ($100). This ministerial order has recently been rescinded. A royal decree, dated November 7, 1902, revives the law of 1857, but suspends its application till a new ordinance has been promulgated. Foreign doctors now practicing are to be compelled to comply with the new enactment within six years.

NEW PUBLICATIONS.

INTERNATIONAL CLINICS.

A new volume of International Clinics must always give satisfaction to the medical reader. These volumes have been much improved, and the wide range of subjects with which they deal make this form of compend one of the best whereby the busy practitioner can keep in touch with the salient points of advance in medical science. The present volume contains its full modicum of valuable matter. The article on the blood in health and disease is in itself a complete treatise on all that is modern in hematological science. The work done by International Clinics is unique and exceptional and cannot be too highly praised.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners, by leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., with the Collaboration of John B. Murphy, M.D., Chicago; Alexander D. Blackader, M.D., Montreal; H. C. Wood, M.D., Philadelphia; T. M. Rotch, M.D., Boston; E. Landolt, M.D., Paris; Thomas G. Morton, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh, and John Harold, M.D., London, with Regular Correspondents in Montreal, London, Paris, Leipsic, and Vienna. Volume IV, 12th Series. Cloth, $2.00. Philadelphia and London: J. B. Lippincott Company.

DISEASES OF METABOLISM AND NUTRITION.

The name of Carl von Noorden has been for some time associated in the minds of medical readers with the problems of metabolism and nutrition. These two volumes will therefore be much prized by all interested in the important problems they discuss. The first volume is a treatise on obesity, and considers carefully and explicitly the significance of the various reduction methods now in vogue. As these disorders of metabolism impair the activities of so many in middle life there can scarcely be a more attractive subject for the practitioners' attention. The second volume treats of nephritis in its various forms, and is a masterly effort on the part of a distinguished clinician to impart the results of his extended experience in the management of these maladies. The dietetic suggestions, being as they are based upon caloric values, are full of usefulness. These books may be commended as timely and opportune contributions to medical literature.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Carl von Noorden, Physician in Chief to the City Hospital, Frankfurt à Maine. Authorized American Translation. Part I, Obesity; Part II, Nephritis. New York: E. B. Treat & Co., 1903.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Operations for Cancer of the Mouth and Neck.

In the past three decades, says G. W. Crile (*Interstate Medical Journal,* February, 1903), there has been a continuous decrease in the operative mortality, and with the single exception of the branchiod cancers, a more notable increase in the percentage of cures has been accomplished. Especially in the last decade there has been evidence of more confidence in operations, as indicated by an increased number of cases submitted early. The supreme importance of early diagnosis and early and radical operation is becoming widely recognized. The same may be said of the so-called "precancer" stage, especially of the tongue. Except in cancer of the upper jaw, the disease is now regarded as involving the regional lymphatic system as well. The disease may be found in the lymphatic vessels as well as in the lymphatic glands. It rarely extends to other parts of the body. Physiologic and clinical evidence show that severing the thoracic duct causes but little disturbance, owing to its free anastomoses; that the effect of resection of the internal jugular vein is practically *nil;* that unilaterial resection of the vagus does not alter the heart's action, the respiration, nor the digestion, but produces a permanent hoarseness only; that division of the superior laryngeal causes anesthesia of a part of the larynx, but pneumonia is improbable; that division of the inferior laryngeal causes paralysis of the corresponding vocal cord, but interference with respiration is not marked; that division of the spinal accessory has but slight effect, on account of the double nerve supply of the sternomastoid, and the synergistic action of other muscles; that division of the hypoglossal causes temporary interference with speech and swallowing, but compensation occurs; that the submaxillary salivary gland may be removed without symptoms; that the removal of the sternomastoid is not followed by torticollis, etc., on account of the synergistic action of other muscles; that the complete removal of the lymphatic system of one side does not produce a pseudoelephantiasis of the face and head; that permanent closure of the external carotid has an operative mortality of one to two per cent, due to thrombosis and embolism; that permanent closure of the common or internal carotid is attended by an operative

mortality of about three per cent, but in the cancer period of life from twenty to thirty per cent of cerebral complications follow, about fifty per cent of which prove fatal; that temporary closure of the carotid by means of a special clamp, as shown in the writer's forty-three cases, in which neither death nor cerebral complications occurred, is both efficient and safe.

These physiological and clinical data lead to but two objective points in a unilateral operation for cancer of the mouth and neck, viz., complete removal of the disease, and preservation of the blood-supply of the brain. If necessary, sacrifice every other structure between the skin and the plane of the deep muscles of the neck. Loss of blood is the greatest operative difficulty and danger, and usually the cases of least shock are the cases of least hemorrhage. If hemorrhage is likely to be considerable, the common carotid should be closed during the operation. In the mouth cases the anesthetic may be administered through rubber tubes passed through the nostrils to the level of the epiglottis, with the tongue well drawn forward. The pharynx may then be packed with gauze, so as to form an air chamber in the lower pharynx, to effectively prevent blood from entering the pulmonary tract. The dissection should be made on the same plan and as thoroughly as in the radical operation for cancer of the breast. The greater ease and certainty with which diagnosis may be early made in this region, and the rarity of its extension beyond the glands of the neck, should enable the surgeon to obtain even better results here than in cancer of the breast. The hope of the patient lies in early diagnosis, early operation, and a logical technique.

Methods of Closing the Abdominal Incision.

W. D. Haggard (*American Medicine*, Feb. 7, 1903) says that the most reliable statistics prior to 1894 show that hernia occurred in from six to twenty-nine per cent of abdominal sections.

Suppurating abdominal wounds result in from thirty-one to sixty-eight per cent of hernia (according to the method of suturing).

The frequency of hernia is increased with the thickness of the parietal wall.

The longer the incision, the greater the likelihood of hernia.

Drainage openings predispose to its production.

The site of the incision does not materially add to the occurrence, if suturing is uniform.

Abdominal supporters have absolutely nothing to do with the prophylaxis of this condition.

Subsequent pregnancy does not influence its occurrence.

The best preventive hernia is the aseptic healing of the wound.

Through-and-through suture is satisfactory in thin subjects with short incisions, and is recommended when rapid closure is imperative.

The best method of suture is one which insures accurate coaptation of the fascia.

The method of closure in three layers by continuous silkworm-gut in peritoneum, fascia, and subcutaneously seems to be freer from objections than any other. Its extended trial is desirable.

The patient should be confined to bed from two and a half to three weeks to insure thorough organization and consolidation.

After a wound is completely healed no other influence acts deleteriously upon the permanence and resistance of the cicatrix.

It is believed that less than two per cent of the abdominal incisions should become infected, and not over three per cent of hernias should result.

The Surgeon's Enemy, the Skin.

At the recent meeting of the Medical Society of the State of New York, R. M. Dawbarn (*American Medicine,* Feb. 14, 1903) considered in his address three main topics: "Chemical shaving," "Mending rubber gloves," and a "Method for excluding perspiration from the operative field." With regard to the first, he recommended as a substitute for the razor in certain hairy regions of the body, the application for ten minutes of a 25-per-cent aqueous solution of Merck's sodium sulphohydrate. This would remove the hair as if a razor had been used, and the hair would grow out again after this method just as after ordinary shaving.

For mending rubber gloves, he advised the use of several test tubes, two flat-irons, and a cautery set such as is employed in burnt leather decoration. When it was required to put on a new finger-tip, the tip from the finger of an old rubber glove should be used as a cap, the edges of the rubber having been softened by the cautery and a test tube inserted into the glove finger, bottom up, to serve as a form. The repair is very easily made, and the parts are held together by a twine until firmly united, when they will stand sterilization by boiling. Flat surfaces are mended in a similar manner, using one flat-iron for laying the work upon, and the other flat-iron as a weight to hold the mended parts together. To prevent perspiration in the operating field, Dawbarn recommended dusting this area one hour

before the operation with a powder composed of lycopodium, talc, or zinc stearate with twenty per cent alum previously sterilized by heat. The powder should be allowed to remain on the skin until removed by the usual cleansing application at the time of beginning the operation. Such an application would effectually prevent sweating in this area during the time necessary for the performance of any ordinary operation.

Four Cases of Duodenal Ulcer Perforating Acutely.

D'Arcy Power (*British Medical Journal,* Jan. 10, 1903) reports four cases of duodenal ulcer perforating acutely. From his observation of these cases he draws the following conclusions:

1. Duodenal ulcer occurs more often in men than in women.

2. The extravasated fluid trickles into the iliac fossa, and causes a local peritonitis which may be mistaken for an acute appendicitis.

3. The transparent or bile-stained succus entericus found in the peritoneal cavity is diagnostic of a perforated duodenal ulcer. It is quite different from the gastric contents escaping at a perforating ulcer of the stomach.

4. The prognosis of a duodenal ulcer is worse than that of a perforated gastric ulcer, on account of the greater difficulty of closing it satisfactorily.

5. The prognosis should not be too sanguine until after the lapse of the eighth day, and it is always bad, however well the patient may appear, if the pulse-rate continues bad. The pulse is a much better guide than the temperature.

6. Free drainage is imperative; both iliac fossæ, the recto-vesical pouch, and the space below the liver more particularly, need tubes. It is better for the patient to recover with a scarred belly than that he should die with an abdomen full of pus.

The feeding of the patient is a matter of great importance. Small quantities of food should be given frequently, and if the patient feels nauseated the amount must be reduced at once. It is better to give nutrient enemata for some days after the operation than to administer food by the mouth. In three of the four cases death occurred shortly after operation.

Primary Tuberculosis of the Parotid Gland.

J. Frank (*Annals of Surgery,* December, 1902) says that the etiology of primary tuberculosis of the parotid gland may be divided into a predisposing cause (a slight injury) and an excit-

ing cause (bacillus invasion). The process may be diffuse or circumscribed; the latter is very rare. In some cases the gland tissue, in others the interstitial connective, is the seat of the tuberculous process. Histologically all the elements of a tuberculous process are found. In most of the cases bacilli have been found. The course of this disease, like all chronic infections, is very slow. In most of the cases the enlargement was noticed accidentally, and on account of its slow growth no further notice was usually taken. The symptom found in most of the reported cases was swelling of the glands, in the form of either a circumscribed and fluctuating tumor or a more diffuse, with occasional soft spots here and there, the skin being usually adherent, red, tense, shiny, and edematous. As a rule, on pressure the size of the swelling does not diminish. There was no enlargement of the glands of the neck in any of the cases. In most of the cases pain was late in the disease. The diagnosis, on account of its rarity, the absence of the disease elsewhere, and also the absence of pathognomonic signs, is clinically very difficult. In all cases the diagnosis made before the operation was either syphilis, interstitial parotitis, or malignant growths. The prognosis is very good, the affection being a purely local one. Operative interference results in a permanent cure, as was seen in all primary cases. In many cases temporary facial paralysis resulted, which in course of time disappeared. From the cases recorded we learn that the total extirpation of the gland is not essential to a permanent cure.

Bladder Troubles and the Cause of Appendicitis.

Bladder troubles are not common in the course of appendicitis. They either form part of the general symptomatology of the disease, or may constitute the most striking symptoms in some cases in which the ordinary features are little pronounced and uncertain. F. Lancien (Thèse de Paris, 1902; *British Medical Journal,* Jan. 10, 1903) records several cases of appendicitis in which bladder symptoms were important. Most usually there is retention, or micturition may be difficult, and accompanied by marked dysuria and abnormal frequency of micturition. Such symptoms have been recorded by Guyon as reflex, and may be observed in almost any painful condition of the abdomen, intestinal or otherwise. In almost all the recorded observations of appendicitis accompanied by bladder trouble, the patients had acute appendical symptoms. In some of the cases symptoms of

appendicitis were mixed, the bladder trouble being very marked. In such cases it is impossible to explain the vesical symptoms as due to a reflex irritation. It is more logical to believe that an inflammatory focus is the cause. Bladder symptoms are then more important, retention and dysuria being marked. Such cases sometimes end by an appendical abscess pointing into the bladder and setting up cystitis, pyuria, or even pyelocystitis. A fistula may be permanently established, giving rise to communication between the bladder and an abscess cavity, or even with the intestine itself directly or indirectly, according as this latter opens into the abscess cavity or directly into the bladder. In the case of stercorovesical fistula the urine contains pus, gas, and fecal material. It is therefore important to note carefully any bladder symptoms arising in a patient who may possibly be the subject of appendicitis.

Cholelithiasis.

Boas (*Münchener med. Wochenschrift*, 1902, No. 15) believes the dorsal tenderness over the liver to be an important diagnostic point. This tenderness is found on a level with the two lowest dorsal and first lumbar vertebræ, its width ranging two centimeters from the spinal column to the axillary line. Tenderness in this region indicates an inflammatory swelling of the liver. The dorsal tenderness is found in acute attacks, and is present some time after the attacks. In some cases this tenderness is not present during or after the attacks. The cause of the hyperesthesia, not considering the acute attacks or chronic cases with incarceration, the author believes to be due to a perihepatitis starting from a cholecystitis which later disappears. This tenderness can be demonstrated with faradic and galvanic currents. It is important in the differential diagnosis of such diseases as duodenal ulcers, enteroptosis, with dislocated kidney.

Sinistrocaecal Appendicitis.

Damianos (*Wiener klin. Wochenschrift*, 1902, No. 34) advises as early as possible operation in appendicitis simplex, he having no fatalities to record after his operations; in cases complicated with general peritonitis his mortality is seventy-five per cent. He reports two cases in which the appendix was situated in the left inguinal fossa. The first case was that of a boy eighteen years old who evinced no symptoms whereby a malposition of the organ would be suggested. The second case was one in which

the patient died post operation from the rupture of an abscess which had developed between the convolutions of the small intestines; in this case also there were no symptoms which pointed to a malposition.

MEDICINE.

Albuminuria.

Dr. M. Cloetta, professor of pharmacology at Zurich University (*Lancet,* Jan. 31, 1903), spoke on January 9, at a meeting of the Medical Society of Zurich, on his experimental investigations with regard to albuminuria. In this condition three chemically distinct bodies are concerned, namely, serum albumin, serum globulin, and nucleo-albumin, the last named substance being defined by Professor Cloetta as "that body which can be extracted by sulphate of magnesia, is soluble in water, and can again he extracted by means of diluted acetic acid." With regard to the different forms of Bright's disease the serum albumin and serum globulin are quantitatively the most important. They are found in increased quantities according to the acuteness of the inflammatory process in the kidneys; serum albumin is never absent, and the albumin quotient (Hofmann), or the amount of serum albumin divided by the amount of serum globulin, never exceeds 10. On the other hand, the chronic indurative form of nephritis, whether primary or secondary, shows a larger amount of serum albumin, so that the serum globulin may even be missed altogether. In these chronic forms of nephritis nucleoalbumin is found in such small quantities that it cannot be determined. The intermediate form of nephritis (large white kidney) shows nothing characteristic.

Csasary has arrived independently and at about the same time at the same conclusions. Professor Cloetta's experiments on animals (nine rabbits) poisoned with aloin went to prove that the secretion of these different albuminous bodies was quite independent of the albumin quotient of the blood. A patient suffering from nephritis complicated by eclampsia, who for therapeutic reasons was bled several times, gave the same result—a quotient of 7.8 for the urine, but only the almost constant quotient of 2.2 for the blood. Professor Cloetta proved experimentally that Csasary's conclusion that the blood-pressure plays an important part is fallacious. The important rôle is certainly played by the tissue of the kidney itself, as can be demonstrated experimentally. The state of the tissue of the kidney is responsi-

ble for these variations in the secretion of the different albuminous bodies.

The nucleoalbumin is not derived from the blood serum; it originates in the kidney itself owing to retrogression of tissue. Experiments have been made tending to prove that anatomical lesions and functional disorders do not always absolutely correspond, a view which has already been suggested by clinical observers.

Significance of the Presence of Streptococci in Market Milk.

R. C. Reed and A. R. Ward (*American Medicine*, Feb. 14, 1903) say that the classification of streptococci is still in an unsettled state on account of the lack of reliable differential characters. At the present time the species of streptococci are largely designated by the lesions with which they are found associated, a fact which causes the greatest confusion in the study of this genus. It is noted with regret that many writers refer to streptococci rather loosely without apparently recognizing the necessity for a more specific nomenclature. The common prevalence of mammitis in the cow constitutes the important source of streptococci in market milk. The insidious onset of the disease is responsible to some degree for the marketing of infected milk by dealers with innocent intentions. The results of the common method of milk handling in the stable deserve mention. The milk directly after drawing is usually strained into a forty-quart can or even a larger receptacle. The existence of udder inflammation is frequently first brought to notice by curd-like masses lodged on the strainer after the infected milk has been mixed with the wholesome milk. The ignorance or the greed of the milker, or both, may prevent the rejection of the infected lot. From the references available, it is evident that the medical profession regards the presence of streptococci in market milk as dangerous to public health. The transition from the condition in which a few streptococci remain after a mild attack of mammitis to one in which streptococci are found in a healthy udder is a slight one. The authors have been unable to discover characters by which the streptococci found in the healthy udder can be differentiated from those associated with an active inflammation of those glands. We believe that recent investigations indicate that streptococci are found in the healthy udder more frequently than was formerly believed to be the case. In order to understand the conditions under which these streptococci harbored in

the healthy udder may become virulent, will require a further study of the pathology of mammitis.

The Causation of Cancer and its Treatment Without Operation.

Dr. Robert Bell at the recent Egyptian Medical Congress (reported in *Journal of the American Medical Association,* Jan. 31, 1903) read a paper with this title. As a predisposing cause of cancer Bell narrates the following:

Persistent and prolonged retention of feces containing an undue proportion of decomposing albuminous material, from which enterotoxins are derived, and by absorption conveyed to the blood.

The blood thus contaminated produces a depraved condition of the nervous apparatus, thereby handicapping the functional activity of the various organs, interfering with cell metabolism, and eventually culminating in anemia in young persons or cachexia in the older.

If the functions of the thyroid gland are at fault, these toxins, which otherwise would be neutralized, remain in a position capable of producing serious mischief.

If saccharomycetes be present in the blood this toxic material is liable to undergo chemical changes, causing the formation of uric acid, when uricacidemia will result.

The presence of toxins in the blood, alone or combined with uric acid, exerts a pernicious influence on cellular structures, and confers on them a predisposition to take on a malignant metamorphosis.

Prolonged or repeated irritation of a part is liable to rouse into malignant activity cells which otherwise would have remained dormant.

The vitiated condition of the blood by prostrating the physiologic vitality of the various organs and cellular structures and paralyzing the *vis medicatrix naturæ* affords every facility for the new growth to establish its identity and increase its area at the expense of its environments.

The Modern Aspect of Common Colds.

J. Zahorsky (*New York Medical Journal,* Feb. 7, 1903) is of the belief that colds are due to pathogenic microörganisms and are contagious. The following propositions are given by the author in support of his views: (1) Colds run a more or

less definite course. If colds were merely reflex congestions these should terminate soon after the excitant eased. As a matter of fact, colds last from three to seven days in spite of our therapy. (2) The inflammation begins at one point and spreads up and down the respiratory tract. This is a common observation and very much resembles the dermatitides of infectious origin—*e.g.*, erysipelas. (3) Colds are accompanied by fever and general symptoms. This is especially true among infants. These general symptoms are usually proportional to the extent of the local inflammation. (4) Microscopically as well as macroscopically inflammatory changes are found in the mucous membrane. (5) The ordinary secretion of the mucous membrane is soon replaced by a discharge more or less purulent. (6) Specific microörganisms have been isolated from these secretions. Among these the bacillus influenzæ, diplococcus, lanceolatus, Freidlander's bacillus, streptococcus, etc., have been demonstrated. (7) The varying clinical picture of colds speaks for a variety in the virulence and character of the bacteria. (8) Colds are contagious. It is hard to conceive how this clinical fact, so demonstrable, has received so little attention in the literature of the past. In schools, asylums, and hospitals this fact is very clearly shown annually. In family practice, too, the development of one case after another in spite of care is a very common observation. (9) A relative immunity follows each attack. Were colds merely reflex congestions, these congestions should appear after each exposure. After an attack the individual will be free from a cold for some time.

Miliary Tuberculosis after Abortion.

H. Westenhoeffer (*Medical Press*, Feb. 4, 1903) relates a case of miliary tuberculosis after abortion. The patient, aged twenty-seven, had aborted four weeks when she was admitted into hospital on August 11, with fever ranging between 39° and 40° C. and collapse. The history showed that the fever immediately followed the abortion. She died on the 15th. The autopsy revealed general miliary tuberculosis of all the serous membranes and of the internal organs. The endometrium was especially infected. The tissue was free, but the veins were full of caseating tubercle. This was the source of the general tuberculosis. There was old caseating tubercle in the left lobe and a patch less extensive in the apex of the left lung. The writer observes that when a patient has suffered for four weeks continuously from fever after delivery the case cannot be one of

sepsis. It is very difficult to distinguish between sepsis and pyemia. That is important, as where surgical interference is possible the diagnosis points out the spot, but with sepsis any operation would be useless. He does not think the placenta or fetus could have been infected, although it was not examined, as the disease began after the abortion.

Asphyxia Due to Obstruction of the Larynx by Ascaris Lumbricoides.

Max Wagner (*Deutsche med. Wochenschrift*, 1902, No. 49) reports a case of a boy eight years of age suffering with roundworms. He was given .025 santonin troches twice a day, which was followed by a profuse passage of worms. Once a worm was passed through the nose, and they were also vomited. One day the child was found unconscious on the sofa in a state of cyanosis, frothing from the mouth and nose, the eyeballs upturned, and marked dyspnea. Death supervened in two and a half hours. The post-mortem showed all the changes of asphyxia. The cause was found to be a bunch of seven dead worms 25 centimeters long which were protruding from the esophagus, in the lower third of which a number of living worms were found. Evidently the boy had an attack of vomiting, and the partially expelled mass of worms closed the opening of the larynx. The respiratory obstruction was not complete, hence the prolonged asphyxia.

Some Points Pertaining to the Therapeutic Management of the Uremic State.

H. Stern (*American Medicine*, Feb. 14, 1903) says that diaphoresis is indicated under certain restrictions in every instance of acute uremia and as early as possible. Its action is more lasting in cases of chronic parenchymatous nephritis. Venesection produces its best results in uremia following acute nephritis. In children from 100 to 250 cubic centimeters, and in adults from 300 to 500 cubic centimeters, should be abstracted. The improvement resulting from the withdrawal of this comparatively small quantity of blood appears to be due to the relief of vasoconstriction in the kidneys and central nervous system. The effects of hypodermoclysis and infusion are more transitory, but might prove useful in certain crises. Morphine is innocuous when given in small doses in the uremia of acute renal disease and chronic parenchymatous nephritis, but is not indicated, and is likely to do harm, in the uremia of chronic interstitial nephritis.

The Etiology of Acute Rheumatism and Allied Conditions

R. M. Beaton and E. W. Walker (*British Medical Journal,* Jan. 31, 1903) say that as a result of their experiments they agree with those observers who maintain that a particular microörganism is constantly associated with acute rheumatic lesions; that this microörganism can be cultivated on artificial media outside the living body; and that on inoculation into animals it gives rise to the characteristic lesions of the disease, and can again be isolated from those lesions. Culturally, this organism resembles a streptococcus, but that it is specifically different from an ordinary streptococcus is rendered probable on the application of the test of Marmorek. These authors therefore conclude that the bacterial specificity of acute rheumatism has been satisfactorily established. Its toxic specificity remains, however, to be investigated.

Different Forms of Infantile Icterus.

Skormin (*Jahrbuch für Kinderheilkunde,* Bd. lvi, 1902) from his observations in the Berliner Kinderklinik and the literature on the subject describes the following forms: Icterus neonatorum, the icterus septicus, the cyanosis afebrilis icterica cum hemoglobinuria, infectious icterus, the infection resulting from the intestinal tract, icterus after hemorrhages, catarrhal icterus, icterus due to acute atrophy of the liver, icterus due to congenital defects or obliterations, congenital cirrhosis, and icterus due to congenital growth about the portal vein (peripylephlebitis congenita).

THERAPEUTICS.

Excellent Results in the Treatment of Diseases, Especially Tuberculosis, by the Use of the Violet Ray.

In the symposium on the treatment of tuberculosis, presented at the twenty-eighth annual meeting of the Mississippi Valley Medical Association, Dr. Albert E. Sterne (*Journal of Advanced Therapeutics,* February, 1903) discussed the above subject. For general applications the nude body was exposed to intense light, applied by powerful voltaic arcs, and in addition free ozone was developed from a special ozonating apparatus. For local applications vacuum tube electrodes, connected with one pole of a suitable apparatus, were used. He deduced the following conclusions from his observations: (1) Actinic rays are chemical in their quality, but of small caloric value; (2) they exist mainly in the ultraviolet zone of the spectrum; (3) actinic rays derived from high-

power electric lights are identical to those of solar origin; (4) their use is as rational as sunlight itself; (5) their value lies in their decomposing but at the same time reconstructive molecular action upon the body tissues, mainly the blood elements; (6) their activity is enhanced by the generation of ozone in free and nascent form; (7) their ultimate effect is one of oxidation, consequently they increase the metabolic changes, thereby augmenting the natural process of regeneration within the system; (8) their germicidal action is especially pronounced on account of the fact that germs cannot exist in the presence of free or nascent oxygen in either bianatomic or trianatomic form.

Malignant Diseases Treated by the Roentgen Rays.

H. P. Moseley (*American Medicine,* Jan. 31, 1903) says that the minor cases of superficial malignant disease seem to be most susceptible to this method of treatment.

Relief of pain is a very prominent feature of the Roentgen-ray treatment, and is often noticed after the first exposure. In cases which have not progressed too far, it is almost possible to promise the anesthetic effect.

It is impossible to determine from our present knowledge without trial what cases will be favorably influenced by treatment, but patients should be warned not to be too hopeful.

The danger of burning is a real one. Patients should appreciate the possibility of it before treatment is started, although with precautions it may be avoided. In hospitals, when the operator is doing much Roentgen-ray work the greatest precaution should be used in the care of his own face and hands. The apparatus should be arranged so that all changes in the tube necessary to be made while it is running can be accomplished by switches or mechanical devices so placed that the operator can control them at a distance of 12 or 15 feet from the tube.

Influence of Baths and Douches on the Blood-pressure.

O. Miller (*Archiv für klin. Medicin,* 1902, Bd. 74) found that baths at a temperature of 33° to 35° C. caused a gradual increase in the blood-pressure by reducing the pulse frequency. If the baths are over 40° C. the blood-pressure is increased, due to an increased arterial tension; in the latter increase of blood-pressure and body temperature occur simultaneously. Steam baths, hot air, and electric baths increase the blood-pressure and pulse frequency. Above 35° C. pulse frequency increases, at lower temperatures it

drops. From these observations it appears that baths should be given with precaution in cases of myocarditis, arteriosclerosis, and functional disorders of the heart.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Frontoethmoidal Sinusitis Causing Eye Complications.

Rroeckaert (*La Belgique Méd.*, No. 2, 1901) reports an interesting case with the following history: A woman sixty-two years of age had a very large mucous polypus and evil-smelling purulent secretion from the left side of the nose, produced by purulent inflammation of the ethmoidal cells and frontal sinuses. Under ophthalmic examination there was observable a loosening of the retina in its lower segment and numerous flaky, movable, cloudy spots in the vitreous humor. The frontal sinus was operated upon according to the method of Luc, and the ethmoidal cells curetted in the usual manner. There was complete healing of all symptoms referable to the nose. The vitreous humor also cleared up entirely, and only the lesion of the retina remained; and in the intact portion of the retina there was complete restoration of the visual disturbance.—*Internat. Centrabl. für Laryngologie,* etc., vol. xviii, No. 9.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Acne Vulgaris.

In discussing a symposium on "Acne Vulgaris" before the American Dermatological Association (reprinted in the *Journal of Cutaneous Diseases,* February, 1903) Dr. Samuel Sherwell, of Brooklyn, says that acne occurring, as it does, particularly in the youth of both sexes, more especially in the female, he has long been inclined to attribute it largely to troubles connected with the organs below the brim of the pelvis, such as congestive conditions of the uterus, bladder, rectum, and urethra. As to the importance of the urethra in this connection he would limit it more especially to congestive conditions of the upper segment of the urethra. He believes that these conditions give rise to a reflex irritation and hyperemia. When we meet with cases of rosacea, especially in

women about the time of the climacteric, constitutional treatment directed to the pelvic organs is usually decidedly beneficial. In the treatment of acne he resorts to both constitutional and local measures, and whenever it is necessary uses the curette and massage. He believes that sulphur, in its various preparations, has a pronounced curative effect, and is probably our best local remedy, although ichthyol, salicylic acid, and resorcin may be of advantage in particular cases. If a young girl from seventeen to twenty comes to him with these acute efflorescences, his first care is to find out the condition of the lower bowel, whether she suffers at the time of menstruation, whether the periods are prolonged or shortened. In brief, he tries to get the pelvic region in as normal a condition as possible. He uses local measures on the lesions themselves, as most of us do, his favorite application being the following:

Sulphuret of potash.....1 drachm.
Sulphate of zinc.....1 drachm.
Alcohol and camphor water, each.....1 ounce.
Aqua rosæ .....2 ounces.

For internal use he frequently prescribes the following on account of its beneficial effect on the pelvic viscera, and having good effect in lithemic states generally; there is very frequently, if not most commonly, such a diathetic condition in the middle-aged female:

Sulphate of quinine.....25 grains.
Sulphate of magnesia.....1 ounce.
Dilute sulph. acid.....2 drachms.
Tincture of nux vomica.....½ drachm.
Wine of colchicum,
Fld. ext. of ergot.....ää 3 to 5 drachms.
Glycerin,
Aq. dest. .....q. s. ad 4 ounces.

Dessertspoonful in water mornings on rising; sometimes a dose or one-half dose at night. Should be taken mildly diluted, then one-half tumbler of water in sips directly after.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Ectopic Gestation Advancing to Term.

T. Smith and H. Williamson (*Journal of Obstetrics and Gynecology of the British Empire,* January, 1903) report a case of ectopic gestation advancing to full term without rupture. Patient

was examined after labor pains had set in, when the abdomen presented the appearance of a full-term pregnancy; the fetal heart could be heard and movement felt, but the position of the fetus was not made out. The cervix was long and firm, and the external os small. The pains were slight and continued so, and by the end of the week fetal movements could no longer be felt nor the heart heard. A brown watery discharge began, and the size of the abdomen diminished. Unsuccessful attempts were made to dilate the os. After a week's rest the patient felt well except for occasional pain. Three months afterward an operation was performed, and on opening the abdomen a tumor twenty-two and one-half inches long was found lying to the left of the middle line between the layers of the broad ligament, the base of the broad ligament forming the only connection between the uterus and the tumor. An imperforate cord-like structure, either one horn of a bicornute uterus or the proximal end of the Fallopian tube, was inserted into the tumor. After its removal from the abdomen an incision was made into the wall of the tumor, which was about one-third of an inch thick, and resembled in appearance uterine wall; microscopically it consisted chiefly of fibrous tissue with some muscle tissue. The placenta was one-fourth of an inch thick, shriveled, and easily detachable from the tumor. Within the tumor a well-developed child was found. The pregnancy was regarded as cornual rather than tubal, on the following grounds: (1) The attachment of the round and ovarian ligaments directly into the tumor; (2) the patency of the abdominal ostium of the tube; (3) the high degree of development of the sac wall, and the fact that no rupture had occurred.

Cancer of the Cervix in a Woman Aged Ninety-three.

Findley (*American Journal of Obstetrics,* October, 1902) publishes a full clinical report of a case where a woman aged ninety-three was in very good general health, but consulted him for bloody discharge from the vagina which had lasted six months. She thought the period was returning, as it recurred at intervals of from three to five weeks, the flow lasting four or five days, not unlike her previous catamenia. A cauliflower growth as big as a hen's egg was detected on the anterior lip of the cervix. The vagina was wide, as in a woman in the age of sexual maturity. The growth was friable and bled on handling. The patient had borne eight children; one had died at forty-eight from cancer of the uterus, and the mother of the patient herself seems to have died of pelvic cancer. The patient's menopause occurred at the

age of forty-five. During the subsequent forty-eight years no sign of discharge or hemorrhage had been noted until the bleeding from the vagina set in, and led to the detection of a new growth. This appears to be the oldest case of cancer of the cervix. Findley mentioned one other patient aged seventy-nine, and a second in a patient aged eighty-two.

Uterine Fibroids Not Dangerous in Pregnancy.

Meheut (*L'Obstet.*, November, 1902) has collected eighty-five cases of pregnancy complicated with uterine fibromyoma in the Baudelocque clinic between 1895 and 1902. In sixty-seven cases pregnancy continued to term (over 78 per cent), in thirteen it was premature, in three abortion occurred, and in two the pregnancy was interrupted by operations. In only two cases was the fibroid the direct cause of the patient's death. Thus, though a pregnancy complicated by fibroid requires to be well watched, serious accidents are the exception. When the patient's life is threatened operative interference is necessary at once. In all cases the aim is to let the pregnancy advance as near to term as appears safe. Meheut, however, reports that out of eighty-five children, sixty-five left the clinic alive, whilst twenty (over 23 per cent) were lost.

What Advice Should be Given a Woman Suffering from Fibroid Tumor of the Uterus?

J. R. Goffe (*Medical News,* Feb. 7, 1903) sums up his paper as follows: The proper treatment for fibroid tumor of the uterus, speaking in a broad way, is removal by operation, and that immediately—whether the tumor be large or whether it be small, whether in a married or in a single woman, excepting only women of very advanced years, and those in whom the tumor is complicated by pregnancy. In the last the course to pursue will depend largely upon the circumstances and conditions of the individual patient. As a rule, the majority of cases of fibroid tumor of the uterus complicated by pregnancy will go to full term and be delivered normally. In the hands of an expert, Cæsarian section at full term is safer for mother and child than myomectomy. During gestation, in the rare instances in which such an extremity is required, it is better to take the risk of such a procedure, the necessity of which is very remote, than to destroy the child by inducing miscarriage or taking the risks of myomectomy.

Operation in Late Extra-uterine Pregnancy.

Neugebauer (*Monats. f. Geb. u. Gyn.,* November, 1902) states that during the twenty years he has operated in cases of diseases of women he has had to do with six cases of late extra-uterine pregnancy. In the most recent he operated at the end of the eighth month by abdominal section, removing a macerated fetus and a macerated placenta which did not bleed. The sac was treated like an abscess cavity, and recovery occurred. In three other cases Neugebauer successfully operated; in the fifth, where he diagnosed the condition, another surgeon operated; in the sixth, still under observation, the patient has gone about for a year and a half bearing a dead fetus, but declines any operation as she feels quite well. This case is specially remarkable as the period had remained regular throughout, and besides, there had never been pain throughout the history of the case. By late pregnancy he means gestation near (not at or after) term.

Malignant Uterine Polypus.

Opitz (*Centralbl. f. Gynäk.,* No. 49, 1902) reports two cases in elderly women. The first patient was fifty-seven, suffering from free discharge and hemorrhage. The curette brought away both carcinomatous and sarcomatous elements. The uterus was removed; an adenocarcinomatous mass was found in the fundus, and close to it was the attachment of a polypoid tumor the size of a walnut. The substance showed the characters of a spindle-celled sarcoma, but endothelial elements and cancerous glands lay in its substance.

The second patient was fifty-eight; the uterus was removed on account of evidence of malignancy, as in the first case; and besides, a polypus as big as a hen's egg protruded through the os into the vagina. Two-thirds of this polypus consisted of endothelial cancer, but the rest included true uterine glands. The pedicle, very long, was attached close to the orifice of the left tube.

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ORIGINAL CONTRIBUTIONS.

A CASE OF DIABETES MELLITUS, WITH AUTOPSY.

BY T. E. OERTEL, M.D., AND E. E. MURPHEY, M.D., AUGUSTA, GA.

In view of the renewed interest in the pathology of diabetes which has been aroused by the recent work of Opie and others, who find glycosuria associated with degenerative changes in the islands of Langerhans, we feel that the report of the following case from the medical clinic of Dr. Murphey may not be without interest to the members of the profession:

John M——, forty years old, white, American; laborer; firing boiler at gold mine. Family history: Father died from unknown cause; mother died of consumption. One sister died of pneumonia, and one died from an unknown cause; two living. One brother died of peritonitis, and one from an unknown cause.

History of present disease: Whooping-cough, intermittent fever, and typhoid fever when a boy; typhoid fever again ten or twelve years ago; measles three and a half years ago, leaving patient in present condition.

History of present trouble: Began three and a half years ago in an attack of measles. This left patient in a greatly weakened condition, from which he has never recovered. Troubled with great thirst, ravenous appetite, and frequent micturition; passes from one-half to three-fourths pint every hour or hour and a half. Also troubled by deafness. Has never had any pain. Occasionally troubled by dizziness. Sleeps well. Never had any cough. No night sweats. No fever in the afternoon. Bowels regular.

Inspection: Emaciation marked. Clavicles prominent. Hair thin, due probably to typhoid fever, as he says it has been falling out ever since. Expression of face anxious, worried. Eyes pearly white, appearing dark beneath. Mucous membrane slightly paler than normal. Considerable brownish pigmentation of skin.

Sternum sunken, forming the "funnel chest." Ribs project downward more than normal. Interspaces wider than normal. Apex beat in normal position. Feet swollen to a small extent, also the legs to the knees (slight). Breathing chiefly abdominal, though there seems to be considerable expansion. Pulsation visible in carotids and in the brachials.

Palpation: Expansion of chest bilateral. Pulse 68, temperature 97°, respiration 18. Pulse weak, small volume, low tension. Vocal fremitus present.

Skin has a dry, harsh feeling. Percussion negative. Auscultation negative.

Urinary test: Specific gravity 1030; reaction acid. Color light straw, nearly colorless. Albumin negative. Sugar present in large amounts; one drop of urine dropped into test-tube half full of Haines's solution gives a heavy brick-red color, peculiar smell, sweetish.

Congo-red test with blood positive.

On the twelfth day after admission the patient developed a diffuse bronchopneumonia, which presented nothing unusual in its course, under which he gradually grew weaker, and after fourteen days died.

Synopsis of Autopsy.—J. M——, white, male. Death 10 A.M. Section 11.25, February 23, 1902. Body extremely emaciated. Over the forehead, shoulders, elbows, abdomen, and thigh are patches of brown pigmentation, irregular in size, averaging about 10 centimeters in extent (hemachromatosis).

Body is still warm, rigor mortis absent, pupils moderately dilated, slight post-mortem lividity about the neck.

Abdomen: Walls almost devoid of fat and very thin; muscles reddish-brown and dry. Viscera normal in position, covered by the omentum, which is thin and contains almost no fat. Appendix points backward and downward into the pelvis, where it is tightly fixed by old adhesions. When split open it is found to contain numerous nodular masses, fecal in character. Transverse colon contains fecal matter, descending colon distended with gas; small intestines mostly empty. Mesentery glands are considerably enlarged; portal system of vessels engorged with black blood.

Pancreas lies in its normal position, but is found with difficulty on account of its decreased size and consistence. It measures 15 x 3 x 7-10 centimeters. Brownish, extremely soft, so much so that the usual distinctly lobular feeling cannot be made out at all.

Spleen measures 12 x 6½ x 4 centimeters. Consistence increased, marked hyperemia.

Left kidney: 12 x 6½ x 2½ centimeters. Consistence decreased, capsule thin, color dark brown. Stellate veins marked; capsule strips easily. On section very moist and bloody, pyramids deeply congested, cortex puffy and pale, 8 millimeters in diameter; medullary rays show as reddish lines.

Right kidney: 11½ x 6 x 2 8-10 centimeters. General characteristics like left.

Left adrenal: Small, 4½ x 1 4-10 x 7-10 centimeters. Dark brown and soft. Right adrenal: 5 x 2 6-10 x 6. External brown, quite soft.

On section cystic through entire extent; contains a small amount of thin brown fluid.

Urinary bladder: Dilated with clear, yellowish fluid, mucosa normal.

Liver: 22 x 18 x 8 centimeters. Common duct patent. Consistence increased; surface smooth, mottled, yellowish-brown; congestion marked. On section very moist; somewhat mottled, in general yellowish-brown; lobulations well marked, cuts with some resistance. On pressure portal vessels yield large amount of blood.

Chest: Heart practically normal except for unusual softness of myocardium. Lungs present the usual characteristics of a diffused bronchopneumonia.

Histology.—Head of pancreas: Tissue fixed in absolute alcohol. All parts are well preserved and show no areas of autodigestion. The larger vessels are dilated and filled with blood, the capillaries are also frequently engorged, the red cells being well preserved. There is a slight increase of connective tissue both between the lobules and the acini. A marked round-cell infiltration occurs in the connective tissue, particularly between the lobules; these cells are for the most part mononuclear, the nucleus being round or horseshoe-shaped; the protoplasm plentiful and staining slightly with eosin. A few cells with trilobate nuclei are observed. Here and there are small round cells with a deeply stained nucleus and a thin zone of protoplasm. The cells above described conform morphologically with the various white elements of the normal blood, and it would therefore seem that this is their source of supply. For the most part there is little change in the cells of the acini, though there are lobes which exhibit a marked intralobular increase of connective tissue, round-celled infiltration, and atrophy of the glandular epithelium.

Bodies of Langerhans: The areas are fairly frequent, a dozen or more being seen in a cross-section of this portion of the organ. These, for the most part, are seen to be degenerated to a greater

or less degree. The degeneration is of a hyaline variety and is most in evidence in the neighborhood of the walls of the capillaries, though the blood-vessels themselves retain their integrity. In those bodies most affected the hyaline material comprises the larger part of the area, presenting a homogeneous substance slightly stained with eosin. Here and there nuclei lie within the hyaline material, but more frequently the nuclei are to one side, and in groups, as if they had been pressed aside by the deposit of hyaline matter.

Tail of pancreas: The changes already described as occurring in the head of the pancreas exist in the tail to a far greater degree. The interlobular connective tissue is markedly increased, while here and there intralobular proliferation, with corresponding atrophy of the secreting epithelium, is prominent. Leucocytic infiltration is universal. Between the lobules are frequently seen masses of leucocytes, most of them being of the large mononuclear type, and similar cells are distributed throughout many of the lobules where they lie contiguous to the capillary. Atrophy of the glandular epithelium is in many places extreme, the nuclei of the cells being surrounded only by a narrow zone of granular protoplasm. On the other hand, a large number of acini seem to have undergone no change, and to be capable of normal activity.

The areas of Langerhans are somewhat more numerous than in the sections from the head of the organ; nearly all of them show the hyaline disintegration already described. In many instances the body is almost entirely hyaline, while a few of them show no appreciable degeneration.

Kidney: The kidneys show those changes characteristic of a chronic parenchymatous nephritis with exudation.

Left lung: Sections of the solidified areas found in the lower lobe are seen to be a typical bronchopneumonia of moderate degree.

Right adrenal: A large proportion of the cells of the zona fasciculata have undergone fatty degeneration. The protoplasm is frequently entirely destroyed and the nucleus distorted and shrunken. The cells of the inner border of this zone exhibit frequent pigmentation by an amorphous yellow pigment. The cells of the zona reticularis are cloudy, poorly outlined, and stained diffusely. This is possibly due to post-mortem changes.

Left adrenal: The same changes are observed as in its fellow.

INSANITY IN CHILDREN.

BY M. R. CRAWFORD, M.D.

There is scarcely anything in nature more vulnerable than the brain of the child. It demands for its perfect development the most wholesome surroundings, the most undisturbed opportunities, and the most stimulating care. On the one hand, too much neglect on the part of the guardians or parents has a very harmful effect, while on the other hand too much care and too much humoring are equally enervating. In taking up the question of insanity in children it is not intended to include those who are born with some mental defect, such as epilepsy, chorea, or idiocy. The term should be applied rather to those who are, for a time at least, in health both in mind and body, but who as they grow older exhibit some curious form of mental derangement.

In the first place, nowhere in the world does the child occupy so conspicuous a position as in the United States. Professor Munsterberg, in his scholarly work comparing Germany with the United States, says that the thing which struck him with the greatest surprise was the forwardness and conspicuousness of children in this country. In the average family the child is born into a life where much noise, confusion, and stimulus surround it. It is brought to the table, eats of the same food, and receives much the same impulses as the parent. On this account American children are apt to develop forms of neurosis which crop out from generation to generation, until finally mental monstrosities may appear—idiots, cranks, or epileptics. Fletcher, who has done much good work upon this subject, has taken up the question of the physiological development of the child. He states that in order to understand deflections from mental health it is necessary to take up the causes which produce delusions, hallucinations, and the uncontrolled impulses of childhood. A child being born with a disproportionately large head, in consequence its brain is larger than that of any other animal in proportion to the size of its body, while the brain at the time of its birth has practically no function whatever. In other words, while the child's brain is large, yet it would seem almost at first as if it had been born without a brain, for it sees no form, distinguishes no sound, and receives no impression from the special senses, its emotions being of a reflex character springing from the spinal cord. Even at first the sense of hunger is not manifested for a day or two, and it takes some days to develop the special sense of taste. The sense of touch

comes next in the course of development, and gradually the almost shapeless mass of brain grows into lobules with each region having some special function. Then the eyes begin to discern light from darkness, until the sight of food is associated with stomach satisfaction and with taste.

Without going into the detail of the development of the motor centers and the organized movements of the body, such as the development of speech and motion, we know that the baby at six months does not know actually as much as the pig or the lamb at six days. But from the age of two years on the child rapidly increases its knowledge, the circulation of the whole brain is greatly increased, until at the age of twelve the brain is nearly as large as it is at twenty.

If we make a careful examination of the mind of the child at about the age of five or seven years we will find that no matter how intelligent it may be, and it has largely developed memory, yet it has drawn nothing from conclusion—reason, judgment, and will power are singularly undeveloped. Although its emotions may be intense, they are not regulated. For example, a child may love a toy or a bat as much as it does its parent—it has no judgment in these matters; things of no value at all may be priceless to the child. Therefore, when we come to develop the mind of the child we must remember that it has not the qualities of a man or a woman, and we should not endeavor to make adults of them in mind when they are in reality yet infants.

Oliver Wendell Holmes has said that the time to begin the development of a child is one hundred years before it is born, and the physician in active practice soon finds that this is only too true. It is astonishing how mental defects or shortcomings in parents or grandparents, and certain parental tendencies, are transmitted to the child. Appetite for alcohol, sexual indulgence, or opium seems to be speedily aroused in families presenting previous history of this sort; while other sensations, such as intense emotions, curious generosities or meannesses, are handed down apparently wrapped up in the brain of the young child. Again, influences which in the adult have scarcely any effect, may affect very quickly a child with a healthy mind; for example, an acute attack of fever will produce in a child very quickly delirium, which is a transitory form of insanity, coming on very quickly and frequently lasting quite persistently.

It is a question not yet decided how far heredity plays a part in the development of the child, and how far example; for instance, children subject to long periods of want and exposure fail of proper development, but the stain on the moral or mental

sense need not always be that of heredity; the life of exposure which they have led may have had a potent effect in producing certain tendencies. Children are far more observant and far more exposed to outside influences than is commonly imagined.

Insanity in childhood generally develops between the ages of seven and seventeen. It may develop in the form of paranoia, melancholy, or acute and active delirium. Undoubtedly, one of the most famous examples of insanity in childhood is that of Joan of Arc, who when thirteen years old developed aural delusions which were interpreted to mean voices from the spirit world, and finally, actually the voice of God. Her suggestive influence, her innocent boldness, together with the opportune time at which she appeared, placed in her hands great armies, and for a time she directed the destinies of a great nation. There are many other instances in history of this sort, one of the most unfortunate being that of the unknown French boy who led the crusade of 90,000 children for the Holy Land. They progressed in their journey as far as Genoa, where they were dispersed, and 30,000 wandered back to Marseilles, where some were murdered, some starved, and the rest sold to the Saracens. Fortunately, nowadays the advent of such children would have no effect upon twentieth century progress, although this country in the past has not been free from the influence of insanity, or at least most marked hysteria, in children, as in the case of the Salem witches.

The child who is most exposed to danger is the one who is supersensitive, who is excited too easily, who has crying fits without provocation, who is imaginative, and who is exposed to the modern system of cramming and competitive examinations in school; for undoubtedly our school system, while the backbone of the country in developing its future, is responsible for much disease among children.

Langdon Down, who has taken up the etiology of the various mental diseases in children, has classified them as follows: Congenital idiocy; developmental idiocy; acquired or accidental iodicy; cretinism; backwardness and syphilitic idiocy. Undoubtedly, the majority of cases occurring among children can be classed under the title of developmental idiocy, the term "idiocy" being used in its broad sense of intellectual feebleness.

It is astonishing when we take up the question of the extent of insanity among children to find how many are liable to suicidal mania. In the experience of Fletcher there were four cases occurring in his practice in as many years, while in France two per cent of the suicides are children ranging in age from five to twelve years. It is a curious fact that children who are engaged in labor

are less liable to any form of insanity, while those who are constantly in school, or who have unlimited freedom in reading the fiction of the day or cheap novels of an exciting type, are the ones in whom insanity is most prone to develop.

The following case is a fair example of insanity occurring in children: A boy, aged twelve years, who was well known for his ability as a scholar and who was a great student and reader, suddenly gave up all his boyish pursuits and pleasures, such as hunting and fishing and playing ball. His disposition changed, he did not read, and his imagination developed marvelously; he boasted of his exploits, of his being in fights and murders and other hairbreadth escapes; he told of his great winnings at horse races; and the delusion that he was a detective became so firmly rooted in his mind that he went so far as to try to arrest men on the street. He became suspicious of every one, and was unable to continue his lessons or to devote himself to any line of work. It was only after months of confinement and the strict use of diet and exercise that he finally recovered.

Another instance of acute mania occurring in a boy came under the writer's attention some years ago while crossing the Atlantic. A young man who was in rather ill health, sixteen years of age, and fairly well nourished, was sent abroad by his father for the voyage. After being at sea for several days he developed a number of unpleasant peculiarities. He informed the captain that he was taking the wrong course on the voyage; he interfered with and annoyed nearly all the passengers on the boat, and insisted on bringing up his clothes on the deck to exhibit them to his fellow passengers; and finally, he became so abusive to the captain that that official threw him off the bridge. The same night, while sitting with a party of people, he exclaimed that the boat was not making any progress, that he could walk faster; whereupon he climbed over the side of the boat and started to drop into the water, and if he had not been caught by a neighboring passenger he would certainly have drowned. On being pulled back he became very abusive, and it was necessary to use force to get him to his stateroom. Here he grew rapidly worse until he developed a case of acute mania. He hit his head against the wall of his stateroom, and laughed and screamed, until it was necessary to put him into a straight jacket and take him to the surgery. His condition went from bad to worse, and when the vessel reached Liverpool he was as pitiful an object as well can be imagined. It was necessary to feed him with a stomach tube; he lost weight and strength rapidly, and his screams day and night without intermission were distressing. The ship surgeon stated that he thought

it was the confining life on the steamer that had brought on this attack, for in his opinion an ocean voyage was the very worst thing for any one threatened with any mental collapse or on the verge of any crisis, such as delirium tremens, paranoia, paresis, or acute mania. It was impossible to get the further history of the boy, but it was thought at the hospital at Liverpool to which he was taken, after a study of the case for a few days, that he would probably recover.

It is at times very difficult to decide the border-line between insanity and hysteria. Undoubtedly, clear-cut cases of insanity in children are rare, and it is necessary to take into consideration the other manifestations of hysteria in deciding this question, such as Charcot's diagnostic points of hemianesthesia, affections of sight, and the effect of esthesiogenic agents upon sensibility and motility. Again, undoubtedly, there may be a considerable amount of hysteria mixed in with insanity, and when this does occur it makes the case doubly puzzling.

In the management of these cases it is the first object on the part of the physician to gain their confidence. In order to do this it is necessary to preserve a quiet, open, yet persistently friendly demeanor, and it is not wise to attempt a too direct or impulsive approach. Children as a rule are in no hurry to take interest in strangers, and this is doubly so in cases of this sort. Again, there is nothing to be gained when attempting to win a child in treating him as an animal. It is better to ask straightforward questions and expect equally candid replies, such as a child in a healthy state would propound itself. A jocose, bantering manner is very offensive. As a rule it is better to avoid all appearance of sternness. It is only in children of vicious hysteroid character that actual punishment is needed.

The education of children should be carefully watched, and it should be definitely settled that in the tender, impressionable years their minds and bodies should not be overworked. Again, it must be remembered that children vary widely in mental and moral capacity, and that all children will not improve the same upon the same opportunities. It is in cases of children of criminal ancestry or with neurotic history that the greatest care and training are necessary. For this reason the family physician should be depended upon to do his duty, for he should know of the existence of these taints.

REMARKS ON THE RELATION OF EYE-STRAIN TO EPILEPSY, INSANITY, ETC.

BY WILLIAM CHEATHAM, M.D., LOUISVILLE, KY.

A paper read before the Louisville Clinical Society* by Dr. Thomas P. Satterwhite on "The Relation of Eye-strain to Epilepsy, Insanity, and Allied Conditions," in which he referred to the investigations of Ronney, Boyers, Stephens, Weir Mitchell, and others, and suggested that there should be a competent oculist on the medical staff of every insane hospital, furnishes the incentive for the following remarks.

I suppose what Dr. Satterwhite and other general practitioners mean by "eye-strain" is what we call asthenopia, which, as is well known, is not *per se* a disease, but merely a name that covers a multitude of symptoms caused by a varied line of conditions. Eye-strain or asthenopia may be caused by hyperesthesia of certain parts of the eye, errors of refraction, weak muscles, or from extraneous causes, such as diseases of the nose, uterine diseases, and many reflex troubles. However, it must be remembered that the vast majority of these cases occur in that class of people known as neurotics.

I do not believe that eye-strain can possibly give symptoms of epilepsy or insanity without the subject thereof has a depraved nervous system. I have looked up the subject in a good many books, and wish to give here what the authors have to say in reference to it.

Hammond† gives these causes of insanity (he divides them into four classes) : class two, eccentric irritation, such as dentition, indigestion, venereal excesses, dysentery. If these can cause epilepsy, why not eye-strain, the symptoms and results of which are so varied, so many, and so serious? But there are a great many eye symptoms with epilepsy, such as spasm of the external muscles, ptosis, hyperemia of the conjunctivæ, spasm of accommodation, hippus, myosis, mydriasis, hyperemia or anemia of the retina and optic nerve, concentric contraction of the visual field, conjugate deviation of the eyes and head, or the head to the right and the eyes to the left, etc.

The ophthalmoscopic appearances before, during, or after an epileptic attack are so varied that they amount to nothing: some have found the veins dilated, others the arteries dilated, and again the vessels were all contracted. This of course also varies

*Medical Age, vol. xviii, No. 8.

†*Vide* Hammond, p. 677.

at different stages of the convulsion. The most frequent condition is dilated veins before and during the attack, then an anemic condition of the fundus; the veins always seem to pulsate. Visual auræ are very common, flashes of light, colored lights, visual hallucinations, etc. These being facts, the effects are liable to be construed into causes, and eye-strain given a more important position as a cause of epilepsy than it deserves.

Noyes* says that epilepsy has been asserted to depend upon asthenopia. I cannot deny that in a few cases eye-strain may have been demonstrated to have been an exciting cause or occasion of epilepsy, but there has always been behind it a deeper lesion of the general nervous system. This statement is quite in accord with the disappearance of the epileptic seizures when the muscular trouble is cured.

Well marked relief took place in a case of epilepsy in the practice of Dr. Ronney, of which I had personal knowledge, by tenotomies. The great relief effected by tenotomies was only partially maintained afterward, but the general health improved, and the frequency of the seizures was much reduced as late as three years after the operations were begun.

Drs. Ronney and Stephens have done more work of this kind than any one else. They claim good results, yet when a committee was appointed to choose the cases, and watch closely the effects of repeated tenotomies in cases of epilepsy, although they were given months (or I believe two years) in which to perform their cures, the report of the committee, as I remember, was about as Dr. Noyes has been quoted as saying, to wit: "The effect was only partially maintained afterward."

In Norris and Oliver's System of Diseases of the Eye† the authors refer to this question of eye-strain as a cause of epilepsy raised by Wigglesworth and Bicherton, who examined one hundred cases of epilepsy, and came to the conclusion that, given a predisposition to epilepsy, errors of refraction might be an exciting cause; also weak muscles. They believe correction of these causes of eye-strain in such cases early in the disease will be of great benefit.

Dodd is also quoted by the same authors as saying that eye-strain will cause epilepsy. Of one hundred cases carefully examined by Dodd, forty-nine were cured or relieved by correction of the eye-strain. Dodd expresses great faith in it.

Norris and Oliver say such careful work by men of such character and experience must be worthy of serious consideration.

*Page 209.
†Vol. iv, pp. 629 and 630.

Coover† details fifteen cases of reflex irritation following eye-strain. A few of the many symptoms are convulsions resembling epilepsy, melancholia, and insomnia.

Halberstadt‡ adds to these temporary insanity.

Elmer** adds *petit mal,* epileptical seizures, mental condition approaching insanity.

Lydston|| mentions epilepsy as a possible ocular reflex.

Marlow* mentions a case of error of refraction corrected in which his patient gained twenty pounds, and at the end of five years continued free from an intense nervousness, and an occasional epilepsy that had baffled many physicians for some years prior to the correction of the error of refraction.

As to eye-strain producing insanity, the authors have less to say. It will be observed that I have already mentioned one or two instances.

Again bearing on this subject, Stoemer enucleated an atrophied and painful eye and thus cured a case of epilepsy. Some years ago I reported a similar case in a colored woman. I gave her ether, and while recovering from its effects she had several as severe convulsions as I have ever seen. She had none afterward, as far as I could learn. Others have reported similar cases. Lundy observed an epileptic attack immediately after a cataract operation. All true epilepsy, I suppose, depends upon the sympathetic nervous system. Abundo, Elliot, Colburn, and Frothingham report cases of epilepsy cured by glasses.

The process of insanity is more closely located, I suppose, to the frontal lobes. We have hallucinations of feeling (motor cortex), hearing (acoustic cortex), and sight (visual cortex), so says Knies.††

The ophthalmoscope is of little assistance to us in insanity. When changes are found, albuminuria, tabes, syphilis, etc., are found present, and the frontal lobes are already involved.

Postoperative insanity has been reported many times. Insanity has been known to follow iridectomies, enucleations, cataract extractions, etc. It is marked by hallucinations, terrors, and violence; when following iridectomy and cataract extraction the bandage, total darkness, and the use of mydriatics (which we know will cause such symptoms) have been given as the cause. Leaving off the atropine and removing the bandage have brought about a

†*Medical News,* Oct. 26, 1895.
‡*Lehigh Valley Medical Magazine,* June, 1896.
***Annals of Ophthalmology and Otology,* April, 1896.
||*Chicago Medical Recorder,* June, 1896.
**Medical News,* July 4, 1897.
††Page 159.

cure; still cases have occurred in which only an eye was bandaged, and in which no atropine was used.

I have had acute insanity to follow an enucleation and a cataract extraction, both of which were quickly relieved by the use of hyoscine hypodermically.

In these cases there is usually a predisposition from the use of alcohol, heredity, etc. Many hallucinations of the insane are visual, affecting motion, size, and light. These simply prove that the visual cortex is still working, not that the insanity depends upon any visual defect.

In this connection it may be interesting to note that McBride* summarizes the important features of epileptic insanity in the following language:

1. All forms or varieties of epilepsy are liable to lead to insanity.

2. Nocturnal epilepsy and mental or cerebral epilepsy produce more rapid mental deterioration than other varieties.

3. Epileptic insanity may precede, take the place of, or follow a fit.

4. It may be a quiet type of insanity or the most violent mania.

5. The mania may occur only once in the course of the life of an epileptic who has had the disease from childhood.

6. Epileptic insanity is a most dangerous form of mental disorder, as the subjects of it are suspicious, irritable, and impulsive, being conspicuously weakened in self-control.

7. A condition of mental automatism may follow an epileptic fit and may last for days, during which a person may transact business or buy a ticket and travel long distances, converse intelligently, and yet afterward have no recollection of anything that occurred during the period.

8. Epileptic attacks may occur during sleep, and not at any time or rarely during the waking state, and this nocturnal epilepsy is apt to be associated with violence and ultimate mental weakness.

9. Insanity is rather more liable to be associated with mild fits than with those in which the convulsions are violent.

10. Habitual epilepsy, if continued over a period of years, produces mental failure in some degree in all cases. Those who have a fit at long intervals, say once a year, do not of course come under the designation of habitual epileptics as the term is used here.

**Southern California Practitioner,* December, 1898. Quoted by MEDICAL AGE.

CORRESPONDENCE.

A STATEMENT ON ALCOHOL.

To the Editor of the MEDICAL AGE:

DEAR SIR—Three times during the last half-century medical manifestoes have been issued giving the opinion of physicians on alcohol. The first was issued in 1839, and was signed by 86 persons; the second in 1847, and was signed by 2000 physicians; and the third appeared in 1871, with the signatures of over 4000 physicians, including the names of many leading physicians in all parts of the world. A fourth declaration of opinions is now being circulated for signatures, and reads as follows:

The following statement has been agreed upon by the Council of the British Medical Temperance Association, the American Medical Temperance Association, the Society of Medical Abstainers in Germany, and leading physicians in England and on the Continent. The purpose of this is to have a general agreement of opinions of all prominent physicians in civilized countries concerning the dangers from alcohol, and in this way give support to the efforts made to check and prevent the evils from this source.

In view of the terrible evils which have resulted from the consumption of alcohol, evils which in many parts of the world are rapidly increasing, we, members of the medical profession, feel it to be our duty, as being in some sense the guardians of the public health, to speak plainly of the nature of alcohol, and of the injury to the individual and the danger to the community which arise from the prevalent use of intoxicating liquors as beverages. We think it ought to be known by all that:

1. Experiments have demonstrated that even a small quantity of alcoholic liquor, either immediately or after a short time, prevents perfect mental action, and interferes with the function of the cells and tissues of the body, impairing self-control by producing progressive paralysis of the judgment and of the will, and having other markedly injurious effects. Hence alcohol must be regarded as a poison, and ought not to be classed among foods.

2. Observation establishes the fact that a moderate use of alcoholic liquors, continued over a number of years, produces a gradual deterioration of the tissues of the body, and hastens the changes which old age brings, thus increasing the average liability to dis-

ease (especially to infectious disease), and shortening the duration of life.

3. Total abstainers, other conditions being similar, can perform more work, possess greater powers of endurance, have on the average less sickness, and recover more quickly than non-abstainers, especially from infectious diseases, while they altogether escape diseases especially caused by alcohol.

4. All the bodily functions of a man, as of every other animal, are best performed in the absence of alcohol, and any supposed experience to the contrary is founded on delusion, a result of the action of alcohol on the nerve centers.

5. Further, alcohol tends to produce in the offspring of drinkers an unstable nervous system, lowering them mentally, morally, and physically. Thus deterioration of the race threatens us, and this is likely to be greatly accelerated by the alarming increase of drinking among women, who have hitherto been little addicted to this vice. Since the mothers of the coming generation are thus involved the importance and danger of this increase cannot be exaggerated.

Seeing, then, that the common use of alcoholic beverages is always and everywhere followed, sooner or later, by moral, physical, and social results of a most serious and threatening character, and that it is the cause, direct or indirect, of a very large proportion of the poverty, suffering, vice, crime, lunacy, disease, and death, not only in the case of those who take such beverages, but in the case of others who are unavoidably associated with them, we feel warranted, nay, compelled, to urge the general adoption of total abstinence from all intoxicating liquors as beverages as the surest, simplest, and quickest method of removing the evils which necessarily result from their use. Such a course is not only universally safe, but is also natural.

We believe that such an era of health, happiness, and prosperity would be inaugurated thereby, that many of the social problems of the present age would be solved.

This declaration has already received the signatures of over 1000 physicians in all parts of the country. I have been appointed chairman to present this manifesto to American physicians for their indorsement. I should be very glad to receive the names, title, and address of any physician who is willing to aid by his signature to correct public sentiment and assist in the prevention of one of the great evils of the age. This is purely a scientific effort for the purpose of having a general consensus of opinion of the leading physicians of the world, and it is assumed that American physicians are equally enthusiastic and prompt to lend

their signatures to this statement as in the wine-drinking countries of Europe. A postal card with address and title is earnestly solicited from every medical man who would like to be represented in this great movement for a clearer comprehension of the subject. Address

T. D. CROTHERS, M.D.,
Hartford, Conn.

A REPORT upon the treatment of tuberculosis in Germany, containing many statistics collected by the Imperial Health Office in Berlin, was recently read before the Reichstag. Out of 1000 deaths in Germany of persons between the ages of fifteen and sixty, 316 are due to tuberculosis alone. Persons under fifteen and over sixty are seldom affected. The mortality of the whole population averaged 242 per 100,000 yearly, rising in the Bavarian Palatinate to 329, in Bremen to 337, and in Hesse to 314. The conditions in Germany are shown to be better than in France, Austria, and Russia, but worse than in Switzerland, Belgium, Denmark, Norway, and especially England. The Health Office found that consumption can best be treated in special hospitals, in which Germany now has accommodations for 30,000 patients. The statistics from 1896 to 1901 showed that, on the average, out of 100 cases treated, 87.7 were dismissed as cured or improved; 8.8 as no better; 3.1 as worse; and that 0.4 died. It was hoped that the war against tuberculosis would make further progress through the coöperation of individuals and public bodies with the government.—*American Medicine.*

ONE of the most difficult problems in dealing with tuberculosis among the poor is undoubtedly the supply of suitable and sufficient food. This question has been grappled with by an organization for the improvement of the condition of poor sufferers from tuberculosis which has recently been formed by some ladies among the "leaders of society" at Cambridge, Massachusetts. In order to make the work practical all the medical practitioners in the city have been asked to coöperate with the organization by sending to the members designated the names of those who lack the means to provide themselves wholesome and nutritious food. The dietary which the practitioner prescribes will be indicated by a diet card, and this food will be supplied at the expense of the organization. The organization will also be aided by district nurses, who will visit the patients in their homes. It is intended that the work of the organization shall be educational as well as remedial.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

DIRECTIONS FOR SURPLUS TIME AND TALENT.

The ambitious physician, amply occupied with a remunerative practice already brought under complete and regular control, and yet knowing that a little more effort along the same lines will mean a correspondingly increased income, or some other equivalent advantage, frequently finds it difficult to decide just what policy to pursue. He will, of course, employ any surplus of time and energy to add in some way or other to the professional edifice. The only question in his mind concerns the directions it were best to give the auxiliary privileges of his station. A certain reserve power and influence, no longer all-absorbed by the struggle for recognition and place, wait upon his will.

Since the general tendency in such cases is to seek direct increase of income through redoubled application to an unchanged programme, that course may be allowed to plead for itself, and the more conservative side come for the moment into our view. Much depends, of course, upon the nature and condition of the field to which one has given himself. There is likely to be the opportunity first of all for some minor adjustments to the local situation, now more plainly seen and more easily managed than heretofore. These special conditions will be met by each in his own best way. The limitations as well as the advantages of the field are to be considered, likewise the reasonable place and share of other practitioners in the work. But beyond and apart from this there is considerable latitude for individual plan and action.

Some conscious relaxation not only contributes to strength and vitality, but it is also an excellent preparation for enlarging one's plans. However well posted the physician may be in the progress of his profession, there is always a great deal to see and learn about its allies in the progress of life. Any surplus of time

and energy put forth in this direction adds to the fulness of one's power, makes for readiness and steadiness, helps on substantial reputation, and in the end ought to increase income as mere extension of work and simple forcing of self could not do. Social affairs, movements for good citizenship, and local enterprises and interests generally are always looking for the coöperation of professional men, with special places and privileges frequently provided for them in advance.

The acknowledgment to oneself of some reasonable leisure is also the opportunity to perfect and safeguard the office system—particularly with respect to such book accounts as are more or less good when closely followed up, but worthless if left to themselves. The right sort of attention to this matter may mean an abrupt gain of from five to ten per cent on the income account; while a businesslike efficiency applied in other directions—local transportation service for one—may often decrease expenses in like ratio. New and better methods will develop from these foundations, and the physician will invariably find himself the gainer for them.

EDITORIAL NOTES.

The Prophylactic Value of Antidiphtheria Serum.

While the curative value of this serum has been demonstrated beyond the least shadow of a doubt, not so much has been learned in regard to its value in prophylaxis. For this purpose a circular has been sent to all medical practitioners in the German Empire asking for answers to the following questions: (1) Have you used antidiphtheria serum for prophylactic purposes? (2) How often (*a*) in families (a short account of the conditions is desirable); (*b*) in schools and similar communities (orphanages, homes for widows, holiday resorts, etc.); (*c*) in hospitals? (3) How many individuals in all were inoculated (*a*) under the age of 12, (*b*) over that age? (4) Were all the exposed persons inoculated? (5) How many were not? (6) Were the inoculated persons isolated from those suffering from diphtheria? (7) What serum was used? (8) With how many units of immunity? (9) How many of the inoculated persons contracted the disease? (10) Within what space of time from the inoculation did the disease begin? (11) Did cases of diphtheria occur at the same time in exposed persons who had not been inoculated? (12) Have you ever noted any disturbance of health after the inoculation? (13) Have you

repeated the inoculation in the same persons—(*a*) at what interval of time; (*b*) in how many cases? (14) Are you, on the basis of your personal experience, convinced of the utility of the protective inoculation of antidiphtheria serum? The results of the investigation will be laid before the International Congress of Hygiene and Demography which is to meet in Brussels this year. Such an investigation might with profit be carried on in this country, where antidiphtheria serum is used extensively as a prophylactic.

Discovery of a Plant which Drives Away Mosquitoes.

In certain parts of West Africa the knowledge has long been prevalent among the natives of the existence of a certain species of plant which if placed in a room will drive away all mosquitoes. An English medical officer has been making investigations, and has found that the natives living in Lakoja make use of this plant to protect themselves from the swarms of mosquitoes. Captain Larymore sent specimens of the plant to England for identification, and experts found it to be *Ocimun viride* Willd. It is a member of the order Labiatæ, which grows from Senegambia southward to Angola. Capt. Larymore found that the presence of one of these plants in a room undoubtedly drove the mosquitoes out, and by placing three or four around his bed at night he was able to sleep unmolested without using the mosquito net. If this plant can be successfully grown away from its native soil, it will prove a boon to people living in localities which swarm with mosquitoes during the summer months.

A Step in Advance.

Spain is scarcely the country to which one would look for any great progressive movement, yet she has recently initiated a reform which is entirely in harmony with advanced notions in state medicine. Finding that the asylums and eleemosynary institutions were being filled with needy degenerates, from purely economical motives the Spanish government has insisted upon medical sanction as indispensable to the marriage contract. It is hoped in this way to provide some check upon the increasing production of indigent, needy, and insane. The step is a rational one, and will doubtless commend itself to other nations in time.

ITEMS AND NOTES.

THERE are at present 186 women physicians in Philadelphia.

IT is estimated that nearly 3,000,000 rats are killed in Paris each year.

MEDICAL diplomas were granted to 1350 young men in Germany last year.

RECENT press despatches from Mazatlan, Mexico, indicate a cessation in the spread of the plague.

A COMMITTEE has been appointed to revise the Portuguese Pharmacopœia. Dr. Eduardo Motta is the president.

DR. C. G. JENNINGS has been selected to succeed Dr. John L. Irving as a member of the Board of Health for the city of Detroit, Mich.

THE German Balneological Congress held its twenty-fourth annual meeting this year in Berlin from March 5 to 9, under the presidency of Professor Oscar Liebreich.

THE French Congress of Scientific Societies will hold its forty-first annual meeting this year at Bordeaux from April 14 to 18. One section of the congress is allotted to medicine.

THE proposed new medical buildings at Harvard will occupy a 26-acre lot, and the cost of the entire group is estimated at $2,000,000, of which J. P. Morgan has contributed one-half.

A BILL has been introduced in the California State Senate for the regulation of the practice of medicine and surgery in that State, and for the appointment of a board of medical examiners.

NEW YORK expended last year $754,909 in salaries and $233,691 in expenses for the health department, while Chicago spent $150,688 in salaries and $75,998 in expenses. The health department of Philadelphia cost that city $168,842 and $97,150.

MADAME LUBINGER, who took the M.D. degree at Zurich several years ago, was on December 26 admitted to the same degree of the University of Vienna. There are now two female medical graduates of that University, Madame von Possaner having been admitted some years ago.

A SOCIETY for the Study of the History of Medicine has recently been founded in Holland. It always has a considerable membership. The foundation of the society is due to the initiative of Dr. Peypers, the editor of *Janus*.

THE Board of Health of Rockford, Illinois, having come to the conclusion that cats are largely responsible for the spread of contagious and infectious diseases, has issued an order that all cats living in the houses in which there are cases of scarlet fever, diphtheria, or other contagious diseases shall be put to death.

THE Italian Minister of Public Instruction has authorized the establishment of a post-graduate school of hygiene and medical jurisprudence in connection with the University of Turin. It is intended for graduates in medicine who desire to obtain the title of sanitary officer, and for others who wish to make their scientific training more complete.

DR. CHANCY CLARK DUNHAM, of Fulton, Ohio, aged forty-four years, died suddenly on Sunday, February 22, 1903. He leaves a widow and two sons, aged nine and twelve years respectively. Dr. Dunham was a man of good mental endowment, and was a profound and industrious student, enthusiastically keeping pace with the scientific advances of his profession.

THE Vienna Medical Association has decided to summon a Congress of Social Medicine to be held next spring. Delegates from all the medical societies of Austria will be invited to attend. The conditions of medical practice in relation to legislative measures recently passed in Austria will be discussed. The object of the congress is said to be the organization of the medical profession of the Austrian empire.

A NEW drug laboratory has recently been established in the Chemical Bureau at Washington, with the object of investigating adulterations, testing drugs, and establishing uniformity in the standard of medical substances for future State and national legislation. The American Pharmaceutical Association has passed resolutions approving of the new bureau. Mr. L. F. Kebler, of Philadelphia, has been appointed director.

THE International Congress for the Suppression of Alcoholism will hold its ninth meeting at Bremen from April 14 to 19. Among the communications promised are the following: Alcoholism and tuberculosis, by Dr. Legrain of Paris; alcohol in the life process of the race, by Dr. Plotz of Berlin; alcohol as a food,

by Drs. Fraenkel of Halle, and Forel of Morges; and alcohol in the budget of civilized peoples, by Drs. Helenius of Helsingfors, and Blocher of Basle.

At the recent election for the French Senate, eighteen members of the medical profession were successful. Among these are M. Combes, the Premier, who was returned by two departments; Dr. Peyrot, surgeon to the Lariboisiere Hospital, and a member of the Académie de Médecine; and Dr. Jean Bayol, formerly a medical officer of the French navy, lieutenant-governor of Senegal, and governor of French Guinea. Among the unsuccessful candidates were Professor Cornil and Professor Pozzi.

A bill has been introduced by Mr. McCabe in the Senate of the New York legislature to exempt from taxation all personal property situated within any city of the first class, and belonging to any incorporated medical society of any county, which county is wholly or partly within such city, provided that the property is used for the purposes of the society and not otherwise, and provided that such exemption should not exceed $150,000 in New York or Kings county, and $50,000 in any other county in the State. The bill has been referred to the Committee on Taxation and Retrenchment.

The Italian government has issued ordinances to the effect that all employers of labor in malarious regions, more than two kilometers distant from the residence of the doctor, or in a district where there is no pharmacy, must, under a penalty, always keep by them a quantity of quinine sulphate and hydrochlorate sufficient for the needs of all employees if attacked by malarial fever. Each year, in the month of November, the ministers of finance and of the interior, with the advice of the Superior Health Council, will decide as to the conditions and methods of the distribution of quinine by the State.

Dr. Wilfred T. Grenfell, superintendent of the Royal National Mission to Deep Sea Fishermen, Labrador, is now in Canada, and will shortly visit Chicago. The work, which is distinctly medical in its character, now extends to some 30,000 people, the object being to reach those isolated cases of sickness among the fishermen on the Newfoundland and Labrador coasts that otherwise would receive no medical or surgical treatment. Dr. Grenfell lectured in Toronto recently. His field covers 1500 miles of coast. He is assisted by two physicians and two trained nurses. There are three hospitals located in the mission

field, as well as two hospital ships to ply along the coast. During their first year, 1892, they treated 900 patients. Last year 2774 were treated. The mission cost $20,000 last year, of which amount $2000 was contributed by Canadians. The hospitals contain twenty-four endowed cots.—*Journal of the American Medical Association.*

The annual report of the Visiting Nurses' Association of Chicago calls the attention of the public to the need of following the example of other cities in adopting some organized plan to combat tuberculosis. The report states that 226 new cases of tuberculosis came under their observation last year, and that 60 deaths were due to this disease. The State and city are urged to inaugurate a warfare against the spread of the disease. The whole number of patients cared for by the Association during the past year was 5621, and 37,986 visits were made by the nurses, the greatest demand for their services being during the typhoid epidemic of August and September.—*American Medicine.*

It is asserted that several physicians and a number of associations in Berlin will test the value of sea air on a number of patients suffering from tuberculosis. As ordinary steamers, owing to the noise, unpleasant smells, and want of proper accommodations, are unsuitable, it is proposed to build a large floating sanatorium with roomy, open-air wards, medical supervision, and a complete equipment for scientifically testing the effects of the sea air. The cruising ground is to be the northeastern Atlantic, in the neighborhood of the Canary Islands. Should success attend the effort, further floating sanatoriums will be built. The voyages will, according to *American Medicine,* last about six weeks.

The Institute of Medical Women which was opened two or three years ago in St. Petersburg has recently conferred diplomas on several students for the first time. In reply to an address by the Council of the Institute, the Czar has telegraphed the following gracious message: "The Czarina and myself sincerely thank the Council of the St. Petersburg Institute of Medical Women for the sentiments which it has expressed. May God bless the medical women, who are accomplishing a generous and philanthropic task by working sincerely and honorably for those who suffer, with that lofty self-abnegation which is characteristic of the Russian women." Eleven women received diplomas qualifying them to practice medicine.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Mediastinal Dermoid Tumor.

At a recent meeting of the Gesellschaft der Innere Medizin, Turk (*Medical Press,* Feb. 25, 1903) showed a man, aged fifty-seven, who had fallen ill two weeks before admission to hospital with severe shivering, followed by running at the nose and cough, but no pain in the chest. On October 20 the case was diagnosed to be one of pleuritic effusion on the left side, and was admitted to the second clinic as such, although no objective symptom bore out the diagnosis. After prolonged and repeated examination the extent and appearance with the slight subjective disturbances and no continuance of fever led finally to some doubt. The history was gone into afresh, and the diagnosis again conjectured to be thickened pleura with adhesions. In view of the persistence of the supposed effusion other conjectures were hazarded, such as interlobular exudation, or possibly some complication of the mediastinal folds of the pleura with obliteration of the thoracic portion of the left side. It was also thought possible that it might be a tumor, but if so not of a malignant nature, no cachexia or other indication of exhaustion being present. The Roentgen rays revealed nothing beyond the clinical observations noted.

On November 10 it was decided to explore the region with a needle, but after six insertions in different spots only a few drops of a thick white fluid could be obtained. Under the microscope this appeared to consist mainly of large epithelial cells without nuclei, resembling the corneal cell of the epidermis, but containing cholesterin crystals. The patient refused any further exploration and left the hospital, but returned again on December 16, after two days' fever and feeling generally unwell. Again he submitted to exploration, and again the squamous cells and cholesterin crystals, with a few fatty and epithelial cells, were met with. There were no leucocytes or erythrocytes, which proved that the original diagnosis was in error. It was now surmised that the thoracic dulness was due to a neoplasm composed of epithelial cells and cholesterin, and that no exudation or empyema was present. Again, it was clear that no cyst such as echinococcus existed, while the absence of leucocytes and the presence of these suspicious keratin cells, which retained the

iodine coloring matter in Gram's test, were confirmatory of a morbid growth in the mediastinum.

Therapeutic measures in such a case would necessarily be limited to a surgical operation. If no operation were undertaken the history of such cases pointed to the probability of ultimate rupture of the lung or pericardium and death. The operations which have been performed have resulted favorably, and where no cysts exist the whole mass can be easily removed, allowing the surrounding tissues to contract, but not always without leaving a fistula, which must be guarded against.

A Contribution to the Study of Cancer Mortality.

Charles Templeman (*British Medical Journal*, Feb. 14, 1903) concludes as regards cancer in the city of Dundee: (1) That the death-rate from cancer as a whole during the twenty-five years under review has more than doubled, having increased from 7.27 to 16.92 per 10,000 of the population over the age of twenty years. (2) That this increase is greater at ages over forty-five, is common to both sexes, but more marked in the male sex, though the actual mortality is higher among females. (3) That in females this is chiefly due to an increase in malignant affections of the abdominal viscera. (4) That uterine cancer and cancer of the breast in females have increased, though not in any marked degree. (5) That cancer of the rectum also shows a slight increase in both sexes. (6) That in males the highest mortality is from cancer of the abdominal viscera. (7) That in males cancer of the mouth and upper digestive tract has also greatly increased. (8) That therefore cancer of regions which may be described as "accessible" has increased as well as that of parts which are not so accessible, and where the diagnosis is more difficult, but the increase in the latter is out of all proportion to that in the former class. (9) That during the same period there has been a great improvement in both clinical and pathological diagnosis, as well as in death certification, and consequently a considerable diminution in returns from such indefinite conditions as "old age" and "disease" of the various organs (without any specification of its nature). (10) That this must, to a considerable extent, have helped to swell the returns of death from "cancer." The writer does not think this sufficient to account for the great increase of cancer mortality. This increase is real and substantial, though not so great or alarming as the general public believe. To solve this problem of increase, we must have a more

accurate knowledge of the etiology, and if parasitic in its nature, we must know something of the life history of the organism which gives rise to it.

The Operation of Cholecystectomy, with a Record of Cases.

B. G. A. Moynihan, F.R.C.S. (*British Medical Journal,* Jan. 24, 1903) says the operation of cholecystectomy, or removal of the gall-bladder, is one that is comparatively rarely performed. It is called for under the following conditions: (1) In injuries of the gall-bladder, rupture, stab or bullet wounds. (2) In gangrene of the gall-bladder. (3) In phlegmonous cholecystitis. (4) In chronic cholecystitis with dense thickening of the walls of the gall-bladder and cystic duct, and when the gall-bladder is shriveled and universally adherent. In such cases it is no longer a receptacle for the bile. (5) In distention of the gall-bladder, hydrops, or empyema, due to blockage of the cystic duct by calculus, stricture, etc.; or in cases of mucous fistula following operations for these conditions. (6) In cases of fistula between the gall-bladder or the cystic duct on the one hand, and the stomach, duodenum, or colon on the other. (7) In multiple ulcerations of the gall-bladder or the cystic duct, when gall-stones have eroded their way through the walls into the liver or the duodenum. (8) In primary carcinoma of the gall-bladder.

The author describes the operation in detail, and reports six cases in which it was successfully performed.

Appendicitis.

The following interesting case of appendicitis is related by P. Roux (*Med. Press,* March 4, 1903). A young man, aged twenty-one, who had an attack of appendicitis in December, 1901, was advised by his medical attendant to submit to an operation when the attack had subsided. When he got better, however, the advice was disregarded. On June 3 he had worked all day, had gone to bed in perfect health, and had slept soundly until early morning, when he was awakened with great pain in the right iliac region, which compelled him to see a surgeon. At half-past nine in the morning, four and one-half hours after the commencement of the new attack, he was admitted into hospital. Here, in the assumption that a newly beginning appendicitis would be found, an operation was begun. Behind the cæcum, with which a loop

of small intestine was adherent, the appendix was met with. It was tense and full, kinked and perforated, and it formed, along with the iliac fossa and the cæcum, the walls of an abscess the size of half a nut, within which lay a fairly large fecal concretion. The case shows, as the writer says, that even when incision of the appendix is undertaken in a free interval surprise may be looked for. The abscess, the perforation, and the calculus were together present in such a way as to set up the threatening symptoms that led to the operation.

The Discrepancy Between Clinical Manifestations and Pathological Findings in Appendicitis.

N. Jacobson (*Medical News*, Feb. 28, 1903) says that we must not depend too much upon finding the so-called classic symptoms of the disease. We are not to be misled by apparently mild constitutional manifestations. Local signs are to be regarded as more significant, and can be relied upon to a greater degree than can constitutional manifestations. The persistence, and most assuredly the aggravation, of any manifestation is to be viewed with alarm and strongly suggests progression of the disease. The diagnosis of catarrhal appendicitis, because of the apparently mild symptoms presented, is often unwarranted. True conservatism, if by that we mean the conservation of life, is along surgical and not medical lines in every case of progressive appendicitis. The author believes that every case in which the diagnosis of appendicitis can with positiveness be made demands surgical rather than medical care.

MEDICINE.

Is Tuberculosis Conveyed by Food?

Professor von Hansemann, formerly an assistant to the late Professor Virchow, and now prosector to the Freidrichshain Hospital, recently read a paper before the Berlin Medical Society (*Lancet*, Feb. 28, 1903) on the question of the transmission of tuberculosis by food and especially by milk. The announcement of a paper on this subject, which has received so much attention since the famous speech delivered by Professor Koch before the British Congress on Tuberculosis in London, attracted a large audience. Professor von Hansemann stated that, according to Professor Koch's opinion expressed at London, perlsucht (bovine

tuberculosis) was not communicable to the human subject, neither was human tuberculosis communicable to cattle. In his address read before the recent conference on tuberculosis at Berlin, Professor Koch had dealt only with the question of the transmission of perlsucht to the human subject, not making any reference to the transmission of human tuberculosis to cattle. Alluding to Professor Wolff, Professor von Hansemann said that some trustworthy observers had succeeded in making cattle tuberculous by the inoculation of the virus of human tuberculosis, the obvious inference being that the patient had either suffered from perlsucht or that both diseases were identical.

One of the principal arguments used by Professor Koch was that a collective investigation of cases, or alleged cases, of intestinal tuberculosis produced by food gave an absolutely negative result. It must, however, be remembered that Professor Koch only took cognizance of cases in which every other mode of infection could be excluded, a condition very difficult to satisfy. Another of his arguments was that if the virus of tuberculosis were conveyable by milk or meat there would necessarily be epidemics of intestinal tuberculosis just as there were epidemics of enteric fever. It was, however, unreasonable to compare an acute infection like enteric fever with a chronic disease which depended on so many casual circumstances. The frequency of primary intestinal tuberculosis varied considerably in the estimates published by different authors. According to Dr. Heller cases of primary intestinal tuberculosis were in the proportion of 3.78 per cent of all cases, while according to Professor Baginsky they were in the proportion of 4.1 per cent. The late Professor Virchow had stated that he had observed only three or four cases annually. Professor von Hansemann's figures were practically identical with this, for he has seen 25 cases in seven years. He said that the cases must be classified in four different groups: (1) those in which only intestinal tuberculosis was present, neither the glands nor any other organ being affected; (2) those in which not only the intestine but also the mesenteric glands and the peritoneum were affected with tuberculosis; (3) those in which organs were affected which were never the seat of primary tuberculosis—such, for instance, as the pericardium and the meninges of the central nervous system; and (4) those in which tuberculosis was present in the lungs and the glands also, but the lesions of these organs were obviously of a more recent date than those of the intestines where the ulcers had even partially healed. In no instance had tuberculosis of the lungs appeared as a sequel of intestinal tuberculosis. Tuberculosis of the peritoneum was some-

times observed in cases where the intestinal canal was healthy, and it was therefore probable that tubercle bacilli were capable of passing through the intact mucosa of the intestine.

Professor von Hansemann then called attention to the fact that intestinal tuberculosis might be produced in other ways than through the medium of the food, as, for instance, by the swallowing of the sputum by tuberculous patients. This was especially apt to happen with children, but, nevertheless, in forty children suffering from pulmonary consumption who were examined, tuberculous ulcers of the intestines were found in only ten. It had been said by Professor Koch that butchers who dress the carcasses of tuberculous cattle are not liable to contract cutaneous tuberculosis on their hands or fingers, and this fact has been used as an argument against the possibility of perlsucht being communicated to the human subject, but it must at the same time be remembered that pathologists and those who work in dissecting rooms in various capacities very seldom suffer from tuberculosis of the skin, although examples of human tuberculosis are frequently passing through their hands. An investigation made by Professor von Hansemann showed that among 250 such persons who were examined, there were only four sufferers from tuberculosis of the skin, and in no instance did general tuberculosis ensue. The skin was therefore not very liable to become infected with tuberculosis. Professor von Hansemann concluded his remarks by saying that tuberculosis might possibly be conveyed by food, but that such an event was extremely rare, and that pulmonary tuberculosis was never a sequel of primary intestinal tuberculosis.

The Value of Breathing Exercises.

Hoffman (*Therapeutische Monatshefte,* 1902, No. 10) urges systematic expiration as the best prophylactic or curative treatment for emphysema. The emphysematous patient in his desire for air does not take time for expiration because of the rapidly following inspiration, and his respiratory force gradually becomes weaker and weaker; therefore, before the disease is advanced too far, and whilst the breathing apparatus still retains its strength, the patient should for a quarter to half an hour every day practice deep exhalation. In case of insufficient expirations a rhythmical pressure on the thorax may be employed to alleviate the condition. The abdominal viscera are affected in an important manner by deep respirations, due to the movement of the diaphragm and the abdominal muscles; it affects the liver, and

to a less degree the other movable organs, subjecting them as it were to an internal massage. The resulting pressure also acts on the veins, promoting venous return. The intestines are also activated; thus deep breathing is of value to those suffering from habitual constipation. In cases of syncope it is an excellent remedy. In threatened sea-sickness it improves the cerebral circulation; it also facilitates the return flow of blood from the abdominal organs, and has a marked psychic effect on the patient.

The Prognostic Value of Tubercle Bacilli in the Sputum.

L. Brown (*Journal of the American Medical Association,* Feb 21, 1903) says that the examination of one specimen of the sputum is of value if tubercle bacilli are found in proving the case one of tuberculosis of the respiratory tract; but if no tubercle bacilli are found, one examination is of little value. At least four or five specimens should be examined after the patient is directed how to collect his sputum; from one specimen little or nothing can be said regarding the prognosis. If it is found that the number of bacilli steadily decreases in a series of examinations at intervals sufficiently long, the patient may be improving; but the constitutional symptoms and local signs give much more accurate information. If on repeated examination large quantities of tubercle bacilli are found, the disease has in all probability advanced to caseation. The morphology of the tubercle bacilli affords little or no ground for prognosis, but the short bacilli are suggestive of a more active process. The arrangement of the bacilli in clumps is more apt to be found in the severer cases, but may occur in all.

Clinical Observations in Arrhythmia.

F. Lommel (*Deutsches Archiv für klin. Med.,* Bd. lxxii) studied two forms of pulse arrhythmia, those caused by presystolic contraction and those due to the respiratory phases. In the first form the occurrence of occasional double beats in a cycle he finds in three conditions—in increased blood-pressure, diseases of the heart muscle, and nervous disturbances; in one case it seemed due to the greater internal pressure, and in the two others the abnormal irritability of the heart seemed to inhibit the precontraction. By the exact measuring of the pulse wave which follows on the presystolic contraction and the contraction of the auricle on the cardiogram, Lommel concludes that the increased blood-pressure in the ventricle and in other cases in the auricle

produces the abnormal irritability. The arrhythmic disturbances of the heart (quickened by inspiration and slowed by expiration) are only exaggerated physiologic fluctuations occurring in convalescence, cardiac neuroses, and central nervous disturbances, and very seldom in organic diseases.

Resorption in the Large and Small Intestines.

Dr. Reach (*Archiv f. ges. Physiologie,* 86 Bd.) made some experiments on this subject. He anesthetized dogs and filled certain portions of the intestinal tracts with nutrient media, replacing them in the abdominal cavity. The animals were killed after five hours and the contents of the intestines examined. He found resorption in the large intestine to be decidedly less than in the small. Gelatin solutions were absorbed less readily in the colon than were albumins; the addition of saline solution furthered the absorption of gelatin so that it was equal to that of albumins. The addition of saline solution to albumins caused an irritation of the mucous membrane, and in some cases prevented absorption. In the small intestines gelatin solutions are more readily absorbed than albumins; the addition of saline solutions has no effect when combined with the gelatin, but produces an irritation with albumin. In practice it would be preferable to add gelatin and saline solution to enemas rather than peptone preparations.

Bacteriologic Examination of the Blood During Life in Scarlet Fever, with Special Reference to Streptococcemia.

Ludvig Hektoen (*Journal of the American Medical Association,* March 14, 1903) says that so far as scarlatinal streptococcemia is concerned streptococci occasionally may be found in the blood of cases of scarlet fever that run a short, mild, and uncomplicated clinical course; that streptococci occur with relatively greater frequency in the more severe and protracted cases of scarlet fever in which there also may develop complications and clinical signs of general infection, such as joint inflammations, but even in the grave cases of this kind spontaneous recovery may take place; and finally, that streptococcemia may not be demonstrable in fatal cases of scarlet fever. The theory that scarlet fever is a streptococcus disease does not seem to receive any direct support from Hektoen's work.

Behavior of the Leucocyte in Suppuration.

Blassburg (*Wiener klin. Wochenschrift,* No. 47) studied the leucocyte in suppurative conditions of different intensity in the living organism, taking in regard their locations. The examinations were made daily and at the same hour. He comes to the conclusion that leucocytosis is the usual accompaniment of suppuration; in peripheral suppurations it is not pronounced, but is very marked in peritoneal lesions. After the opening of an abscess there is a decrease in the number of leucocytes, but this decrease does not keep pace with the fall in temperature. The increase in the number of white cells is only a supporting symptom in the diagnosis and prognosis. Leucocytosis in general, and especially that in suppurative and septic processes, must be considered a specific reaction against certain infections.

THERAPEUTICS.

The Radical Cure of Hydrocele.

In his paper read before the Paris Société de Chirurgie, Dr. Fangere (*Medical Press,* Feb. 18, 1903) remarked that hydrocele, usually styled idiopathic, is not the less provoked by a lesion of the epididymis, as a careful examination of the organ would show; spermatic cysts, traumatism, rheumatism, syphilis, etc., only act through the influence of the gland. He would not go into the pathological anatomy or the symptoms of the affection, but he said a few words on the different varieties of hydrocele and the treatment. Besides the multilocular, diverticular, chylous, and milky varieties of hydrocele, there is the infantile or congenital hydrocele and hydrocele in woman. The infantile variety is generally attributed to a traumatism during delivery; it gets well spontaneously.

Congenital hydrocele is not, properly speaking, a hydrocele; it should be considered as a vagino-peritoneal hydrocele, as in reality it is an accumulation of peritoneal serosity in the tunica vaginalis. It is called congenital because it is due to a congenital malformation, and not because it is itself congenital. The lesion is due consequently to an arrest of development. In the normal condition the testicle descends into the scrotum, carrying with it a fold of the peritoneum. It becomes invaginated in the inguinal canal like the finger of a glove, and forms in this way the tunica vaginalis. That canal is only temporary, becomes

obliterated by degrees, and finally in its place is found a thin cord called the ligament of the vaginalis. At birth the canal exists still, establishing a communication between the vaginalis and the peritoneum, but the obliteration is effected rapidly in a few days. When the obliteration is not effected, congenital hydrocele is more frequent between the ages of three and ten; spontaneous reducibility in the horizontal position or provoked by pressure is the fundamental character of that kind of hydrocele, that benign affection, which calls for treatment only because it favors the production of a hernia, is chronic in its evolution, and frequently disappears spontaneously, especially in the child, by obliteration of the canal.

Hydrocele in a woman consists in a serous cyst of the labium majus. As regards the treatment, numerous are the methods recommended; puncture followed by a modifying injection of tincture of iodine, iodoform and ether, nitrate of silver, or choride of zinc. All these injections are more or less painful, and followed by considerable inflammation of the scrotum, the first and last named more particularly. The chloride of zinc solution is composed as follows:

Chloride of zinc.....grs. xvj.
Water .....3 drachms.

After having removed one or two ounces of the liquid, from five to twenty drops of the solution should be injected by the ordinary hypodermic syringe. Inflammatory swelling is the result, but quickly subsides, and in two or three days the patient is cured. The method is much less painful than that of tincture of iodine.

The radical cure by operation is the best method of treatment, since antiseptics have so much facilitated the use of the knife. Several methods are employed—simple incision, partial resection of the tunica vaginalis, total resection of that membrane, and inversion as practiced by Doyen, and which he considers the best.

A Note on the Therapeutic Value of Adrenalin.

J. Gray Duncanson (*British Medical Journal,* Feb. 21, 1903) reports the following case:

H——, male, aged five years. In May, 1901, falling on a sharp stick held in his hand, the right tonsil was penetrated, making a ragged wound, which would admit the end of a black lead-pencil, but was of no great depth. Bleeding was profuse, and the blood, pale-brown in color, did not coagulate. An hour after

the accident the child was pallid and inclined to faint. Tr. ferri perchlor. 2 parts and liquid hamamelis 1 part on wool was applied freely and held in position; plugging was impossible. The bleeding being a rapid oozing, it was not possible to ligature any vessels. With local and general treatment the boy made a good recovery in eight weeks; at first his condition was very critical, with profound anemia and constitutional disturbance. Latterly he took Hommel's hematogen with marked advantage. Some months later he had a severe attack of epistaxis, which was easily controlled by plugs of gauze soaked in adrenalin solution 1 in 1000.

On September 13, 1902, he collided with a perambulator, and the pointed end of a brass rod struck him at the middle of the upper orbital ridge on the left side. The mother thought the wound insignificant, and having some adrenalin solution, applied it on linen, and as the bleeding almost at once ceased, did nothing further.

On September 16 alarming bleeding occurred, and the child was seen by the writer on September 17, at 1 A.M. The upper and lower left eyelids were swollen and deeply ecchymosed; there was a small irregularly shaped punctured wound, with edges showing no signs of healing, in the middle of the left eyebrow; from this blood was pouring out in a steady stream. There was little or no coagulative power in the blood. A plug of gauze packed into the wound passed in a downward direction for three-fourths of an inch, and in no way controlled the hemorrhage; to pack tightly was impossible owing to the situation. The author then soaked a piece of double cyanide gauze in adrenalin solution 1 in 1000, and passed it round the wound, packed in a fresh portion treated in the same manner, and bandaged tightly with a pad over all. In sixteen hours he renewed the plug, and again in another twenty-four. No further bleeding took place, and the wound granulated up in ten days. The boy is a hemophilic, and the history of the two accidents treated by the old and the newer methods is striking.

Irrigation in Acute Urethritis.

A. L. Chute (*Boston Medical and Surgical Journal,* Feb. 12, 1903) says there are three chief misapprehensions with regard to the employment of irrigation in acute urethritis: (1) It is generally believed that the object of such treatment is to abort the attack by the bactericidal action of the fluids used. This would be an impossible accomplishment, since any solution strong

enough to kill the gonococci would also kill the lining mucous membrane of the urethra. The irrigations merely keep the urethra clean, and the solutions used, by virtue of the temperature at which they are employed and their slightly irritating qualities, increase the blood supply and phagocytosis, and so lead to cure. (2) It is believed by some that the risk of infecting the posterior urethra is increased. The author believes that posterior urethritis occurs less frequently in patients treated by irrigation than in those treated by other methods. (3) It is believed that the method should only be used after the most acute stage has been passed. This belief is also erroneous. Irrigations should be begun as soon as the diagnosis has been made. Chute claims the following advantages for the method: "A great increase in comfort; in the vast majority of cases a speedier recovery; a somewhat lessened liability to the complications which attend the acute stage; probably a very considerably decreased liability to the late complications. The solutions recommended are either a potassium permanganate solution of 1:10,000 to 1:8000, or a silver nitrate solution of 1:15,000 to 1:10,000. Both solutions should be gradually increased in strength, and the second one is probably more effective in the chronic than in the acute stage. The temperature of the solutions should be a little over 100° F., and one or two quarts should be used at one time. When it is possible, two irrigations a day should be given for the first week, then daily for another week, then twice a week till the condition is cured. Occasionally the method fails and other measures have to be resorted to."

The author summarizes his conclusions as follows: "That while irrigation is at times and in occasional instances disappointing, it gives in acute urethritis the best individual results, the best general results; that it offers the patient the greatest immediate comfort, the greatest immediate safety; that as prompt if not more prompt recovery takes place than by any other means; that there is more certain recovery, and with less probability of late complications."

Dry-air Treatment of Hydrarthrosis.

Cahier describes the good results he has had in the treatment of hydrarthrosis and hemarthrosis by means of dry air heated to 115° C. (*British Medical Journal*, Feb. 21, 1903). The apparatus which he uses is very simple, consisting of a wooden box. In this is placed the affected knee. At one end of the box is a place for a tube which brings in hot air, by means of heating

it with a petroleum or spirit lamp. It is necessary to have a thermometer capable of registering high degrees of temperature. The limb is placed in the apparatus for an hour, after which it is massaged, and if necessary electricity applied to the muscles. This treatment should be continued for eight to ten days. The writer states that the results of such treatment are most satisfactory, and it is astonishing to find that high temperatures—115° to 120° C.—are borne without any inconvenience.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Treatment of Trachoma by X-ray Tube Exposure and by High-frequency Current.

Stephenson and Walsh (*Medical Press and Circular,* No. 7, 1903) believe a new and brilliant field in the treatment of trachoma has been opened up as a result of their work with the *x*-ray tube exposure and the high-frequency current.

Of four cases of trachoma treated with the focus tube the eyes appeared to be cured in two, while the other two gave every promise of a favorable result with a continuance of the treatment.

Every case showed a definite improvement from the first exposure. The immediate effect of the focus tube was to render the granular bodies redder and more prominent. This was followed by a stage during which rapid absorption of the granulations took place. From fifteen to seventeen exposures, each lasting ten to fifteen minutes, were followed by complete cure of the trachomatous affection.

In the use of the focus tube by unskilled or careless persons, great havoc to the delicate structures of the eyes might easily follow.

After twenty-two applications by the high-frequency current a case of trachoma was apparently cured. A twelve-inch spark coil (Cox) was run from the main connection with a D'Arsonval high-frequency apparatus. One end of the solenoid was earthed, while the other was connected with a vulcanite electrode, with which the closed eyelids were gently massaged. A small brush discharge of about half an inch was obtainable from the electrode, and this probably would have acted upon the trachoma equally well without actual contact of the electrode with the lids. So far as can

be ascertained this is the first application of the high-frequency current to the eye. By this means, as with the focus tube, more improvement has been effected in trachomatous lids than could have been reasonably expected under months or even years of ordinary escharotics.

The Operation for High Myopia.

While most physicians prefer a preliminary needling followed in a few days by a linear extraction of the swollen and opaque lens matter, Dr. Voigt (*Scottish Medical and Surgical Journal,* February, 1903) advocates a bolder technique, the clear lens matter being evacuated through a linear incision without a previous needling. He maintains that the experience of the Leipzig clinic is strongly in favor of this method. Among the advantages claimed are:

1. Avoidance of multiplicity of operations, and therefore lessened risk of accident.
2. The rarer occurrence of glaucomatous symptoms as a complication.
3. Less prolonged hospital treatment.
4. Less frequent loss of vitreous.

Dr. Voigt takes a favorable view of the high myopia operation, and does not think it increases the risk of retinal detachment.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association..

A Case of Follicular Psoriasis.

J. M. H. Macleod, in the *Polyclinic* for February, 1903 (Medical Graduates' College, London, Eng.), says that the disease began when the patient, a boy of seven, was five years of age—a somewhat early age of incidence for psoriasis. It first appeared in patches on the inner sides of the thighs, and subsequently attacked the elbows, trunk, and scalp. But in addition to the larger patches in the usual situations, on the abdomen and back, extending up on to the neck and down the limbs, there was an eruption of smaller lesions varying in size from a pin's head to a split pea. These consisted of small, acuminate scales, situated on a vivid pink base. So acuminated were these lesions that on passing the hand over the back of the neck, where they were

especially numerous, the skin felt like a nutmeg-grater. The lesions were found to be situated at the orifices of the lanugo hair follicles; they were absent from the skin of the hands and feet. A patch of psoriasis was present on the penis.

The case is of interest owing to the difficulty in making a diagnosis between the smaller lesions and those of pityriasis rubra pilaris. Indeed, many of the smallest ones are practically identical with those of the latter disease. The scales are much harder and more adherent than those of ordinary psoriasis, and are here and there associated with horny plugs passing into the hair follicles. The more discrete distribution of the eruption, the fact that the backs of the fingers are unaffected, and the presence of ordinary patches of psoriasis in the usual situations, show that the case is not one of pityriasis rubra pilaris, but is an example of the unusual type of psoriasis which has been named psoriasis follicularis.

A Case of Lymphodermia in Localized Patches.

J. M. H. Macleod, M.R.C.P., in the *Polyclinic* for February, 1903 (Medical Graduates' College, London, England), reports the following case:

The patient, a middle-aged woman, presented a large pad-like patch of thickened skin measuring about three inches in breadth and extending in each lower limb from the ankle to about two inches below the knee. These patches were clearly demarcated and were raised above the level of the skin, from a quarter of an inch at the upper part to three-quarters of an inch at the ankle. The affected skin was yellowish-pink in color and deeply infiltrated. The surface was irregular and presented numerous roundish, semitranslucent nodules, each about the size of a split pea, and giving to the condition an appearance that has been aptly compared to frog's spawn. The patches had been present for about five years.

This unusual case is an example of what has been termed *Pachydermia lymphangiectatica,* or localized elephantiasis. The patient is also the subject of exophthalmic goitre, but no causal connection can be traced between the general complaint and the affection of the skin. Nor has any adequate explanation been found for the lesions on the skin. There is no blockage of the veins of the thigh, and no history of repeated attacks of erysipelas such as have been known to set up thickening of the integuments in the lower limbs. The treatment has been conducted on purely general principles, and has included massage of the affected limbs.

The result has been distinct improvement in the general health of the patient, the patches have acquired a softer character, and for the last two years they have not increased in size.

Actinomycosis of Vulva.

Bongartz (*Monats. f. Geb. u. Gyn.*, November, 1902) examined a peasant woman who complained of swelling in the privates. The labium majus was swollen and covered with orifices of fistulæ discharging pus. The tracts were slit up freely and scraped; the actinomyces was detected by aid of the microscope. Three-quarters of a year later no signs of recurrence could be detected. Bongartz observes that only two similar cases have been recorded —one by himself, and one by Leiblein, of Prague.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Incomplete Transverse Congenital Occlusion of the Vagina, and a Theory as to its Origin.

Transverse septa of the vagina, according to S. A. Brinker (*New York Medical Journal*, March 7, 1903) are rare, occurring in about one in 5000 cases—about .002 per cent.

They are derived from an inclusion by Mueller's ducts of cells from the Wolffian duct or ducts after the formation of the genital cord, and are therefore epiblastic in origin. Their perforation is proof of the normal conduct of Mueller's ducts in all other respects. Transverse septa of the vagina being normal in adult sheep, whales, dugongs, the manatee, and the chimpanzee, they represent in the human being a reversion, "a return to an ancestral type." Their function is purely speculative, but may have to do with the facilitation of conception; and when they appear in the human female may have a similar purpose in harmony with other minor defects of development.

The treatment of this condition is excision of the septum with suturing of the cut edges. In unmarried women no treatment is necessary. If the septum is first seen early in pregnancy, it may be excised; if during labor, a crucial incision will be sufficient, with subsequent removal of the septum. The prognosis for the child is usually bad unless the septum is incised early, or unless it

is not too strong to be burst by the advancing head; for the mother, it may result in serious lacerations or fatal hemorrhage.

Normal Labor After Puncture of an Obstructing Dermoid Cyst.

Toth, of Budapest (*Orvosi Hetilap; British Gynecological Journal,* November, 1902), reports the following case from Professor Tauffer's clinic: A woman of twenty-seven, who for five or six years had been conscious of an abdominal tumor, finding herself pregnant and fearing that there might be some difficulty in her labor, sought advice. There was a normal pregnancy of eight months and the fetus was alive, but in front of the sacrum and pushing the lower part of the uterus upward and forward there was a firm inelastic tumor as large as two fists and hardly movable. In view of the risk a recent abdominal cicatrix would be in labor, no operation was attempted, though it was evident that at term, unless the size of the tumor was lessened, the child must be sacrificed. When labor came on the obstruction prevented the engagement of the head; the cyst was therefore punctured, about half a liter of fluid escaped, and the head descended and delivery took place without accident. It was afterward ascertained that the tumor had become quite small, and that it contained some particles of bone, but there was no intention to proceed to any radical treatment unless there should be further development.

Rupture of the Uterus.

Lafourcade (*British Gynecological Journal,* November, 1902) reported a case to the Académie de Médecine of a multipara of forty-two, who during a tardy labor was seized with violent pain and a feeling of something giving way in her abdomen; the uterine contractions ceased, laparotomy was immediately performed, the child extracted from amidst the intestines, and the uterus amputated above the vagina. The woman was well in a few weeks. The rupture extended for 12 or 13 centimeters between the folds of the left broad ligament, and for 5 or 6 centimeters above the isthmus along the anterior face of the uterus. The uterine tissue seemed to be quite normal save for some nodules of embryonal cells, perhaps to be attributed to slight interstitial myositis, which Richelot, in commenting on the case, said was very little to account for such a formidable accident in an apparently healthy woman who had already had four normal confinements.

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THE VALUE OF GUDE'S PEPTO-MANGAN IN ANEMIA.—Anemia is a very common disease in this country (Cuba), and consequently one against which the physician is often obliged to contend in the practice of his art. While the use of the ordinary iron preparations often gives all the effects that could be desired, yet it usually produces a condition which may be regarded as a secondary disease—constipation. In looking about for a preparation which would not present this very serious disadvantage, which cannot always be counteracted by the coincident administration of laxatives, we came across Gude's Pepto-Mangan, which, according to the published statements of many clinicians, seemed to us a remedy worth trial in a large series of cases. Accordingly, we obtained a sufficient supply of this preparation for our hospital, and began to treat all our cases of anemia, in which iron was indicated, with Gude's Pepto-Mangan.

In presenting now the results of our observations with this pharmaceutical compound, we may say at once that our expectations were more than realized, when we noted its efficiency in combating the disease, and its perfect palatability and freedom from constipating after-effects.

One of us, Dr. Benitez, chief of the laboratory of the hospital, undertook the task of keeping minute records of all the cases observed, including a record of the amount of hemoglobin and of the number of the red blood cells, both before and after the treatment. For the purpose of illustration we relate briefly six cases, which show conclusively the effects of Gude's Pepto-Mangan on persons with anemia, and prove without doubt that the administration of this remedy is connected with none of the disadvantages and discomforts attending the use of the ordinary preparations of iron.

Case 1.—N. G——, aged twenty-six years, was admitted to the hospital, suffering from loss of nutrition, emaciation, pallor of the skin and mucous membranes, loss of memory, anorexia, mental depression—in a word, from all the typical symptoms of anemia. This condition was traced in his case to a chronic malaria, from which the patient had been suffering for a long time. The patient weighed only 102 pounds at the time of admission.

Pepto-Mangan (Gude) was given in doses of two tablespoonfuls twice daily, at breakfast and at dinner respectively, with some cinchona wine. The first blood examination showed 2,400,000 red blood-corpuscles c. m., by the Thoma-Zeiss method. Ten days after the beginning of the treatment this patient, who had been so extremely pale when he entered, began to improve as regards the color of his cheeks and general appearance. His general well-being was so marked that he spoke with pleasure of the marked improvement in his condition which had taken place since he had been taking the new remedy at our hospital. In these ten days he had gained five pounds in weight and was able to walk around the ward without the lassitude which he had felt when he was admitted. The blood was examined a second time, showing an increase of 300,000 red blood cells. The patient was discharged cured after fifty

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days' treatment, weighing 130 pounds and with a blood-count indicating 2,800,000 red blood cells c. m.

Case 2.—Mrs. C. D——, aged thirty-four years, who gave a history of miscarriage, was admitted with the symptoms of anemia, secondary to the loss of blood occasioned by the accident mentioned. The chief symptoms were emaciation, loss of strength, and gastrointestinal disturbances. She weighed only 90 pounds when she entered the hospital, and her blood showed a marked diminution in the amount of hemoglobin, and only 2,300,000 red blood cells to the cubic millimeter.

Gude's Pepto-Mangan was prescribed in the same doses as in the preceding case, and all went well until the tenth day, when the patient of her own accord, in order to facilitate the cure, and to accelerate the recovery, took five tablespoonfuls of the preparation during the day, causing a slight disorder of the stomach. The administration of Pepto-Mangan was thereupon discontinued, and tablets of bismuth and salol, together with a purgative, were given. Five days later the Pepto-Mangan was resumed, at first in doses of two teaspoonfuls, and two days later in doses of two tablespoonfuls. The further course of the treatment went on without any mishap, and the patient recovered completely. On leaving the hospital the hemoglobin was found normal, and the number of red blood cells was found to have increased to 3,500,000 c. m., while the patient's weight had increased twenty-one pounds within fifty days.

Case 3.—Mr. M. D——, aged twenty-six years, who had suffered during the preceding month from an attack of acute articular rheumatism involving a number of joints, entered the hospital complaining of the symptoms of anemia. He had the appearance of a convalescent, with pale skin and mucous membranes, fatigue in walking, emaciation, etc. There was edema about the ankles, but no valvular lesion in the heart, and there were, in ad-

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dition, absence of appetite, insomnia, functional depression of the genital apparatus, and dyspepsia. The patient weighed only 92 pounds, and his blood when examined showed a decrease in the amount of hemoglobin and only 2,500,000 red blood cells c. m. At the end of fifteen days' treatment, which consisted of the administration of two tablespoonfuls of Pepto-Mangan (Gude) at breakfast, of the same amount at dinner, and of an additional tablespoonful at noon, the patient had gained a great deal of strength, his pallor had almost disappeared, the hemoglobin had increased and reached its normal quantity, and the red blood cells had increased to 3,200,000 c. m. The patient was therefore discharged completely cured at the end of forty days after admission.

Case 4.—Mr. R. G——, aged forty-two years, who did not show any signs of organic disease, and who presented no characteristics of a gouty or lithemic diathesis, was admitted to the hospital in a greatly disturbed state of mind on account of attacks of vertigo, palpitation of the heart, extreme weakness, and various erratic pains in the muscles. He gave a history of a recent attack of influenza, during which his nervous symptoms had become intensified. He had not had a very marked rise of temperature, and the respiratory passages were scarcely affected during this attack, but there were severe pains in the back and joints, and an intense headache. The examination of the blood showed the presence of 3,000,000 red blood cells c. m., and the patient was found to weigh only 110 pounds.

He was placed exclusively on Pepto-Mangan (Gude) treatment. Twenty days later the pains had ceased; he ate well; his weight had increased to the extent of four pounds, and the red blood-corpuscles had increased in number by 200,000. Thirty days after admission he was discharged cured.

Case 5.—Miss C. P——, aged sixteen years, was admitted to the hospital with a very pale skin and a deficient muscular

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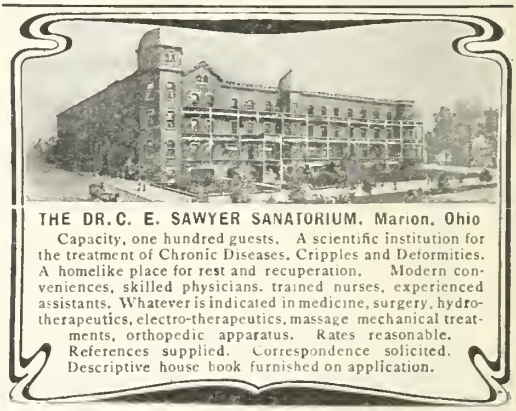

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and adipose development. Her menstruation had become irregular, and she had suffered from various nervous disturbances. Her growth had not kept in harmony with her nutrition, and she presented the characteristics of chloroanemia, as frequently seen in Cuban girls—namely, accompanied by a series of neurasthenic symptoms. She weighed only 87 pounds, and the blood-count showed only 1,800,000 red blood-corpuscles c. m. After ten days' treatment the number of red blood-corpuscles increased by 200,000, and the weight of the patient by three pounds. Twenty-six days after admission she was removed from the hospital by her relatives, and on discharge her weight was 94 pounds.

Case 6.—Mr. G. F——, aged thirty-eight, whose previous history was negative, and who had not suffered from any severe illness shortly before admission, entered complaining of loss of flesh and strength, decrease of normal weight, and extraordinary fatigue after his usual work. He attributed these symptoms to transgressions of hygienic rules. The first blood examination showed 2,600,000 red blood cells c. m. The patient weighed 106 pounds on admission. Thirty-six days later, after having been under treatment with Pepto-Mangan (Gude) during the entire period, he was discharged at his own request. He had increased eleven pounds in weight and his red corpuscles numbered 2,850,000 c. m. (an increase of 250,000). He went back to his usual work without experiencing any unusual fatigue.

To sum up the results obtained with the employment of Pepto-Mangan (Gude) in the treatment of anemias, we may say conscientiously that it is the best remedy we know of for this purpose, and that we do not hesitate to commend it to the medical profession at large, and especially to our *confrères* in Cuba, as an iron preparation that possesses all the advantages that can be demanded of such a remedy, and none of the disadvantages that are char-

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acteristic of other iron preparations. We would especially emphasize also that Pepto-Mangan (Gude) is very pleasant to the taste, and is most easily taken by patients of all ages and with the most delicate digestions.—DR. ENRIQUE DIAGO, Havana, Superintendent of Hospital No. 1, Havana, Cuba, and DR. JOSE F. BENITEZ, Havana, Chief of the Laboratory, Hospital No. 1, Havana, Cuba (translated from the *Progreso Medico*, Havana, April, 1902).

TYPHOID TRACED TO MILK SUPPLY.—"It is asserted that a contaminated milk supply is responsible for the numerous cases of typhoid which have lately appeared in Paterson, N. J. It was found that in 80 per cent of the cases milk was supplied by one dealer. Investigation showed the presence of germs in this milk, and from this finding the source of the contagion was traced to a family in the vicinity, several members of which were afflicted with typhoid fever and which supplied milk to the dealer in question."—*American Medicine*, Jan. 31, 1903.

There is always an element of danger in using peddled milk, doubly so in its use by children and invalids. Investigation of the milk supply of our larger cities will reveal many instances of infected milk such as the above. In this connection it is gratifying to note that many leading physicians, appreciating the danger of contaminated milk, are advising their patients to use Highland Brand Evaporated Cream, which has all the qualities and advantages, with none of the dangers, of peddled cow's milk.

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THE MEDICAL AGE

Vol. XXI. DETROIT, APRIL 10, 1903. No. 7.

ORIGINAL CONTRIBUTIONS.

REFLEX NEUROSES IN WOMEN.

BY EDWARD BURTON WARD, SELMA, ALA.

No other class of patients tax the forbearance and skill of a doctor more than those cases of transferred nervous troubles daily presented to us either at the bedside or in our offices. I might also add that there are no cases with which one can establish a reputation more easily. Coming to us as they do day after day, rehearsing the same monotonous tales of vagrant and indefinite pains, we are apt to become indifferent and to overlook the real cause of the trouble. This is a mistake. We should make it the rule to go into a careful examination of every case, note each symptom, search out the cause, and discover what distant organ is diseased and may be transmitting these perplexing phenomena. There is a cause for every deviation from the normal, and every pain or paroxysm is but the signal telegraphed from the offending organ. Truly has it been said that "many of these simple deviations from the normal are really precursors of conditions of a most serious nature. There is every reason to investigate carefully these minor ailments, because of their frequency and the important bearing they have upon our success as practitioners." A glance at the wonderful mechanism of the nervous system is sufficient to explain why we are made to suffer pain. Connected by a more perfect system of rapid transit than the mind of man ever conceived, with the battery cells of the cerebrospinal system to furnish the motive power, and the multitudinous nerve fibers spreading over the entire body transmitting the current, we are prepared to give notice when any point along this circuit is not working smoothly and in order.

"Man's greatness is shown after a lamentable fashion, by the endless variety of aches and pains by which he is teased or tormented, and by the lifelong power of enduring their fiercest

assaults. Besides pain, man is vexed by an army of strange sensations, overwhelming emotions, and vexatious thoughts. Nevertheless, pain often serves a useful purpose, for as a rule it insures the cure of a host of diseases which would otherwise only become known when incurable."

It is not my purpose to go into a study of the minute or gross anatomy of the nervous system in the presentation of this paper; time would not permit such details, nor would I tax your patience with them. The study of the nervous system is too profound, and the history of the numerous reflex centers now known is too long for a reproduction here. Still, we cannot fully understand these perplexing reflex troubles until the anatomical relations and physiological functions of the various nerve tracts have been "traced from the terminal plates to the central ganglia." These groups of symptoms—most of the reflex neuroses being symptoms, yet often producing more distress than the organic disease from which they take their origin, "emanating from an obscure, localized irritation, affecting important organs most diverse in their functions, connecting distant parts by a chain of ganglionic and cerebrospinal nerves, involving the system in all its parts, form subjects of interest and study, not alone for the specialist and gynecologist, but for the general practitioner also. The brain acts as a central reflex organ, but the spinal cord is the central reflex organ *par excellence,* not so much from the great number of reflex centers located in it, as from the fact that this is probably its most important function; while the brain, including the medulla, is much devoted to other important functions. The gray substance of the cord is the principal central reflex organ within which the exchange from afferent to efferent impulses is effected. Then the sympathetic or ganglionic system comes in for its share of attention, with its special ganglia, the solar plexus, most intimately concerned in the gastric neuroses."

A neurosis may then be defined as a generic term for conditions of hyperesthesia or disturbance of the nervous system which set up disease in an organ that is healthy, or without evident lesion of any of its parts. These disorders are marked by total intermissions, which are never found in true organic disease, although the latter may have great remissions. Functional diseases are always peripheral, never central, although the centers may be affected secondarily. Dalton says the irritability of the sensitive nerve fibers is most directly manifested during life by the production of sensation. This sensation, however, does not exist in the nerve itself, but in the nervous center where its fibers terminate.

The nervous system stands as a medium of communication between different parts of the living body, so that a stimulus applied to one organ may excite the activity of another. This communication between adjacent or distant parts is never direct, but always a circuitous one. It passes invariably through an intermediate nervous center, which receives the impression conveyed to it by nerve fibers from one organ and reacts by sending out a stimulus which calls into activity the other. This is called the "reflex action" of the nervous system, because the stimulus is first sent inward to the nervous center and then returned or reflected in the opposite direction. In this process the intermediate act between the inward and the outward passage of the nervous stimulus is accomplished in the gray substance of the nervous centers. Each organ or anatomical element, when subjected to the application of a stimulus adapted to its physiological character, reacts in a way peculiar to itself and produces a visible result of a definite kind. The sympathetic nervous system undoubtedly serves as a medium of reflex action between the sensitive and motor portions of the digestive, excretory, and generative apparatus; and it is certain that it takes a part in which the cerebrospinal system is also interested. There are accordingly three different kinds of reflex action which may occur wholly or partially through the sympathetic system:

1. Reflex actions taking place from the internal organs, through the sympathetic and the cerebrospinal system, to the voluntary muscles and sensitive surfaces.

2. Reflex actions taking place from the sensitive surfaces, through the cerebrospinal and sympathetic systems, to the involuntary muscles and secreting organs.

3. Reflex actions taking place through the sympathetic, from one part of the internal organs to another.

McGillicuddy says that "the stomach and intestines are probably the most frequent cause of transferred pains;" after these he places the uterus and its appendages, and next the eye or heart. Irritation from the stomach causes reflexly a large variety of pains. "It is not possible to decide always whether these pains are reflex, or are due to vasomotor disturbances, or the circulation of morbid products in the blood, as in cases of fermentative dyspepsia." Another authority divides the reflex neuroses into: (1) those of the pelvis; (2) those of the alimentary canal; (3) those of the head; (4) general nervousness, including hysteria.

When the Great Anatomist carved with His scalpel an image out of atomic nature and called it Man, the grandest result was

thought to have been attained. When from Man, throbbing with life, a portion of his anatomy was extracted to make for him a companion, then the acme of perfection was truly attained. Well could He rest from His labors, for the masterpiece had been produced. Defying imitation, this result of divine skill stands preëminent, without a parallel in the world. The hand of a Phidias fashioned out of marble a vain effort to imitate; the brush of a Raphael or a Michael Angelo took up the task, but to fail. "This mysterious problem can never be thoroughly understood. Science, with profane hand, seemed almost to raise a corner of the veil which hides the secret of the creative energy, when the microscope revealed to the curious gaze the primordial embryonic atom, almost at its first conception. The first impulse of a new existence, about to repeat that ever wonderful miracle, the incarnation of spirit, seemed almost presented to the eye. But here human intelligence pauses. The voice of God says again, as of old it said to the encroaching waves: 'Hitherto shalt thou come, but no further.'" Whatever may be the essence of life, be it agent or endowment, it is only known by its phenomena. The lily has yielded its softest tints to this marvelous creature. There was placed in the citadel of thought the great batteries of the brain which flash from her face the expressions of every emotion and reflect the image of her Maker. Thought and reason predominate. Along the insulated conductor is laid the great cable, the spinal cord, from which pass out the many electric wires, establishing a perfect system of communication, along which are transmitted the currents of life. How strange that such a perfect being should be permitted to suffer pain, and how hard to realize, as we see her with haughty mein and graceful step, the poetry of motion and the evolvement of beauty, permitted to toss in the throes of hysteroepilepsy, or becoming inanimate in the grasp of a cataleptic spell.

> Why then, this decree of an allwise Maker?
> "Of man's first disobedience and the fruit
> Of that forbidden tree, whose mortal taste
> Brought death into the world and all our woe."

The divine injunction, "Be fruitful and multiply," is often followed with a penalty, and the perpetuity of our race results in pain and diseases. Yet, still—

> "Our Maker bids increase; who bids abstain
> But our destroyer, foe to God and man?"

The delicate structure of the sexual organs in women and the Herculean task imposed upon them render women prone to reflex

nervous troubles. The uterus and its appendages, from the continued performance of their functions, sooner or later take on inflammatory symptoms which are reflected to other and more remote parts of the body. We have, says a writer, come to feel that a woman's organs of generation are seldom in a state of perfect health; rather more, that they are centers from which emanate the most terrible and awful nervous explosions. Every vibration of the nerve-fluid in the genital terminals meets with a sympathetic reverberation, and is often reëchoed a hundredfold in the spinal and cerebral centers, which reflect even the physiological action of the reproductive organs.

In the highly sensitive nervous organization, then, of woman we find these reflex symptoms most fully developed in response to lesions of the sexual organs, the controlling influence in the functional life of woman. Says Engleman: "The uterine organs respond readily to a cerebral impulse by the intertwining of the ganglionic and cerebrospinal system." The most important reflex neuroses come under the classification of the hysteroneuroses.

Engleman's definition of the hysteroneuroses is: "Phenomena which simulate a morbid condition in an organ which is in an anatomically healthy state, and which are not due to structural changes in the organ in which they appear, but to morbid or physiological changes in the uterus and ovaries." Engleman has written a very valuable article on this subject. He states that in the vast majority of these cases the trouble is dependent upon uterine changes alone, and not upon those of the ovary. "Treatment directed to the uterus proved more successful." This statement is verified by the frequent failure to cure these attendant nervous symptoms after the simple removal of the ovaries and tubes. We should never, therefore, guarantee to our patients a perfect cure of their nervousness after such operations. "Whatever result is obtained in amelioration of these symptoms is dependent indirectly upon the uterine involution following, and not directly by the removal of the ovary as the offending organ." Most of the neuroses come on near, or accompany, the menstrual period. "The two most important epochs in the sexual life of woman, the coming and going of the menstrual period, are marked by increased susceptibility of the nervous system." It is at this time that the delicate nerve fibrils are under such great tension that their vibrations are diffused over the entire system, until the strain is too great—a snap, a broken link, and relaxation comes on. Such shocks are too much for our American women. Nervous invalids are numerous about us, persons who are fright-

ened at every sound, jump and start at the slamming of a door, and whom the sight of a mouse throws into a cold perspiration. The reason is easily dethroned and subordinated by the superior influence of easily excited emotions.

The age of puberty is a critical time in the life of our daughters. Too much care cannot be bestowed on their training at this time. Their brains should not be overtaxed, for premature and excessive mental activity dwarfs the bodily growth and enfeebles the functions in general. Ambitious at school, they are permitted to crowd on all the studies possible; late hours are required to master these lessons; not enough sleep is allowed to restore the loss. Soon from the bright rosebuds, promising and robust and healthy, they become pale and anemic, the rosy tints fade from their cheeks, irregular and painful menstruation comes on, insomnia fastens its hideous grasp upon them. They droop and fade, and at last grow into nervous women, with an inheritance of all the reflex neuroses of their ancestors settled upon them. This is a sad but true picture of our girls at this age. We, as guardians of their health, should call a halt ere it is too late. Again at the menopause we meet with many of these cases of exaggerated nervous troubles. It is at this stage of woman's life, after climbing the rugged hill thus far on life's journey, a change may come, the path may lead on up to good health, or a turn in the road may carry her rapidly down to the grave.

I have time here only to briefly mention the other varieties of reflex neuroses: The cerebral, exhibiting itself in the different kinds of headaches so often met with at the time of menstruation; the gastric, exhibited in vomiting of pregnancy; functional paralysis; vascular, pharyngeal and laryngeal, bronchial, intestinal, renal, vesical, glandular, ophthalmic, aural, lingual; the articular neuroses; the reflex dermatoses; hysteria; hysteroepilepsy; spinal; and the cardiac. Often women consult us for imaginary heart disease, and it is sometimes a very difficult matter to convince them of their true condition. The vagus, an important tract, is in direct connection with the ganglionic centers, and carries the uterine impulse to the heart, resulting in functional irregularities; while pain and distress about the heart are often reflected from the digestive tract. Women are easily alarmed and become firmly impressed with the fear of sudden death. The troublesome cases of cystitis are met with in uterine displacements, lacerations of cervix, inflammations, and in pregnancy.

Lacerations of the cervix and perineum are fruitful causes of these transferred impressions. Right here I would like to empha-

size the fact that at every childbirth, in primiparæ, lacerations of the soft parts occur, their extent varying in degree according to the resisting forces met with. I say this notwithstanding the fact that there are some doctors who say that they never have such accidents in their practice. They are wont to boast of their superior skill to their less fortunate brother. You may laud the merits of this or that kind of forceps, axis-traction, or what not, but these accidents will occur in spite of the best care. He who tells me the contrary has had very little experience in obstetrical work, or does not adhere very closely to the oath of Hippocrates to be truthful in all things. In cervical lacerations, the scar tissue left by nature in an attempt to repair the trouble is responsible for the nervous symptoms that ensue. Incarcerated in its fibrous grasp are nerve filaments, which furnish no end of reflex nervous symptoms. In an operation on the cervix thorough removal of every particle of this dense mass is essential to complete success. Those cases of retrodisplacements of the uterus attended by prolapsus, with a relaxed vaginal floor furnishing no support to prevent dragging on its ligaments, are only relieved by operation. The skilful gynecologist can report many such results. It is unnecessary for me to dwell at length on these cases, although their importance is duly acknowledged.

I wish now to call your attention briefly to those *bêtes noires* in our practice, hysteria, catalepsy, and hysteroepilepsy. How often are we confronted with these trying cases, and how difficult it is to control our patience under such circumstances. This trinity is peculiar to women, although I have met with it in men whose nervous systems are built on the feminine type. The definition of these troubles, "emotion gone mad," is very expressive; another, a "furor of the womb," is suggestive. "There is no emotion without visceral reaction, and the inordinate reaction of the sexual organs on a predisposed nervous system shows itself by hysteria." In utero-ovarian diseases the hysterical paroxysms are brought on by pressure over the diseased organs, as easily, says one, as sound is produced by striking the keys of a piano. We often pay too little attention to these cases, and sometimes diagnose as hysterical those which may be more serious. Many a poor woman's aches and pains are carelessly dismissed with the expression from us, "Only reflex, functional, your disease is a phantom;" in other words, hysterical, though we dare not tell her in plain English, for if you wish to insult the dignity of woman accuse her of having hysterics. "The word hysteria does often become to the doctor a will-'o-the-wisp, misdirecting his attention

from the real source of the nervous symptoms, which might have been once cured with comparative ease, but have become deeply rooted in a debilitated constitution."

I hope I will be pardoned for relating a bit of personal experience along this line occurring in my younger days. I shall never forget the incident. It is indelibly impressed upon my memory. I was sent for to attend a lady who was subject to the worst kind of hysteroepileptic and cataleptic spells. Unfortunately for me, I was not familiar with her idiosyncrasies, and wishing, naturally, to give her prompt relief, I proceeded to administer a hypodermic of morphine. Unfortunately, I let her know what I was going to give. She informed me that she could not take an opiate in any form; that her old doctor, who had crossed over the river, and who was beyond the call of a hysterical patient, never would give it to her. Notwithstanding her protest I gave it, thinking it but a delusion of an overbalanced brain. In a very few minutes I was sorry for what I did, immensely so; for no sooner had the needle been withdrawn than off she went into the most fearful contortions, yelling and screaming, with an expression of horror depicted on her face, as she tried to escape the myriads of little devils that hovered around her, grinning in satanic glee. Soon she sank exhausted into a cataleptoid state. You can well imagine the state of my mind about that time. The cold perspiration began to creep slowly down my spinal column, my solar plexus wired its message of sympathy to my trembling epigastrium, my knees grew weak under me, my tongue seemed to cleave to the roof of my mouth, fear like a pall enveloped me. There she lay as inanimate and as cold as a marble statue. I thought I had killed my patient! I dare say many of you could report similar experiences. I would add that I have many times since given that same patient opiates, unknown to her, with no bad results. I would, however, say that I do not approve of the indiscriminate use of opiates in these cases, for sooner or later confirmed habits are established and the doctor is held responsible.

Before I close this paper I would like to again speak of the importance of not treating too lightly and indifferently the demands of these unfortunately afflicted individuals. Although they try our patience, seemingly beyond endurance, let us remember the proverb: *"Suaviter in modo, fortiter in re."* That they do suffer both mental and physical pain is true beyond a doubt. Phantom pains are sometimes more intense than real. Even if we find that there are no real pathological conditions existing, it is our duty to minister to the mind as well as to the body. "The

science of hygiene, if not the science of medicine, must undoubtedly in the future give greater heed to these multifarious stimuli, for the sake of their effects." "In the liberality of an enlightened age there may be but little surprise at newly discovered relations between man and the organic life around him; yet in the cumulative knowledge of continued experiments the proximate cause of disease may be found at last within the grasp of scientific research, and modes of prevention become as important to man as are now the means of cure." "Any doctor," says a noted authority, "can cure acute disease—nature does it for him, if he will let her alone; but the highest test of skill is to cure chronic diseases of the reproductive organs." As peripheral irritation is a very decided factor in the production of reflex neuroses, treatment of course should be directed to removal of this irritation. The rational cure of these distressing nervous phenomena is the real sedative women want and not the empirical use of drugs. The true physician seeks to understand and to regulate the laws and phenomena of vitality; he is the pilot who guides the frail bark of human life through innumerable obstacles and perils, to the peaceful haven of health and safety. He is the high priest who enters into the most sacred precincts of domestic life. It is his duty to watch over the first dayspring of existence, and the last gleam of its setting sun. Not only is it his duty to keep vigil at the couch of pain, but to cheer the soul under its acute suffering, and alleviate the decay of nature; and it is a very difficult task sometimes to buoy up the hopes of patients reduced to despondency by repeated relapses.

TUMORS OF THE BLADDER.

BY ROBERT GROSSMANN, M.D., PHILADELPHIA.

It is a remarkable fact that we know so little of the causation of the tumors of the bladder, and yet in the past fifteen years the growth of our general knowledge on the subject has not been inconsiderable, for our knowledge especially of their treatment has largely evolved within this period. There are more benign than malignant tumors in this region, for of the former we have seven varieties, while of the latter only six, two forms of carcinoma and four of sarcoma. The papilloma is the commonest form of bladder tumor, while unfortunately carcinoma comes next in the order of frequency.

There is a disputed class of cases which seem to partake of the characteristics of both papilloma and cancer to which Thompson,

the well-known English authority, gives the title of "transitional intermediate growth," which he considers to be a papilloma degenerating into a malignant growth. But Caird, writing on this subject in the *Scottish Medical and Surgical Journal* for December, 1897, brings out the point that they all possess the peculiarity of tending to end fatally whether benign or malignant, if not interfered with surgically. In the case of tumors which have widely infiltrated he considers perineal drainage as one of the best palliative measures; yet suprapubic drainage gives as great relief and less inconvenience, for after it is established the patient can go about, the urine being held in by the use of the proper appliance. The cystoscope will show whether an operation will be possible in the case of malignant tumors. If the tumor can be removed without cutting the ureter, the prognosis is of course less serious, while naturally the division of one ureter is less dangerous than that of both. In case it is necessary to cut the ureter it must be implanted again in the bladder, or if that is impossible, in the rectum.

Albarran has collected the statistics of the results of operations upon the bladder, and has found that after the removal of innocent bladder tumors the mortality is six and seven-tenths per cent, while following the operation for malignant tumors forty-five per cent died. The technique seems to be having a good effect, for in 1890, in nineteen per cent of cases of innocent growth, the tumor returned after operation, while in 1894 the percentage in the same class of cases was only fourteen. This improvement may be due to the fact that the submucous tissue and the mucous tissue around the tumor are now quite thoroughly removed.

Many authorities, especially the older, call the papilloma a division of the fibroma—in fact, the papilloma is known largely as "villous fibroma." The papilloma as far as external configuration is concerned assumes many shapes—for example, there may be a complex arrangement of branches resembling a tree, or at other times in the shape of truncated elevations with a raspberry-like surface, or again as wart-like eminences resembling little branches of coral. Lastly, they may bristle with hair-like papillæ or villi. Still in all these varieties the histological elements remain the same, consisting of extremely delicate prolongations of the normal connective tissue of the bladder, enclosing one or more capillary loops and surmounted with round columnar or many-sided epithelia. These tumors may be single or multiple, and may be scattered over a considerable area of the mucous membrane

of the bladder. When the fibrous element prevails they seldom bleed; to these Thompson gives the name of "fibropapilloma." Agnew reported a case in which he removed a growth of this character from the bladder of a woman, springing from one side of the organ, which occupied over one-half of the viscus. These neoplasms grow rapidly, and being soft and vascular cause vesical irritation and urinary obstruction, together with incessant and painful micturition and slight hemorrhage.

Bodine reports a case where this tumor was mistaken for stone in the bladder; it proved to be a papilloma completely incrusted with the lime salts of the urine, and gave all the signs of a calculus. Such growths many authorities regard as invariably returning after operation, and hence in a certain sense incurable; but in modern surgery this verdict is not now so sweeping.

The rarest form of all papillary growths is the "polypoid fibroma," which may give rise to curious symptoms; not only is micturition frequent, but there appears sudden retention in consequence of the growth when the pedicle is long, floating into the neck of the bladder or even the urethra. One case has been reported where this tumor in a woman floated into the urethra and was snipped off by the attending physician, and yet her condition for years had baffled her attendants until this occurrence.

The occurrence of myxoma in the bladder is more common in children, being in reality a fibroma which has undergone mucoid transformation. Although it is usually a single growth, it may have several heads; should there be but little connective tissue, its appearance is gelatinous. On the other hand, myoma is a single growth which often attains a large size, even to the size of an orange; it is made up of connective tissue and unstriped muscular fiber with a tendency to pedicle formation. The other forms of benign tumors of the bladder are hydatid cyst, dermoid cyst, adenoma, and angioma. These latter groups, however, are more or less surgical curiosities than anything else, as only a few cases are to be found in medical literature.

The following general facts are interesting in this connection: Males are more affected than females, many authorities giving the percentage as twice as great. All bladder tumors are more common after thirty-five except myxomas. Carcinomas are most frequent after fifty. Two-thirds of all bladder tumors occupy the lower half of the viscus, while the favorite situation for the papilloma is around the orifices of the ureters.

The adenoma is the only benign growth which is different in having glandules embedded in a stroma of connective tissue. It

usually rises from the mucous surface of the bladder as a convex eminence with a broad base; hypogastric palpation and the use of the finger in the female and the sound in the male are excellent means of diagnosis here.

When it comes to the consideration of malignant growths we find that we have flat-celled and glandular carcinoma, and myosarcoma, spindle-celled sarcoma, round-celled sarcoma, and lymphosarcoma. Carcinoma is the commonest form of malignant tumor of the bladder; clinically speaking it may be scirrhous or encephaloid, the growth being single or multiple. It may be pedunculated and sprouting into the bladder cavity, or appear as an ulcerated surface with indurated edges raised and everted while the surface is covered with ragged necrotic tissue. Histologically this substance is composed of a connective tissue intercellular substance, in the spaces of which lie irregular shaped cells sometimes packed together in a "cell-nest" form; the tumor grows by extending deep into the structures of the bladder, and has the tendency to destroy contiguous tissue by direct extension. And yet curiously enough the percentage of cases in which the disease involves the neighboring organs and tissues outside of the bladder is small; possibly this is explained by the fact that the case proves fatal before this extension can take place. The marked peculiarity of cancer of the bladder is its tendency to remain localized for long periods of time and that its course is generally slow. The scarcity of lymph channels in the bladder and their anatomical distribution does not favor extension. There are cases on record where patients have lived from five to thirteen years.

When the practicing physician comes to the question of symptoms and diagnosis, he finds that the cardinal sign of bladder tumors is *hematuria,* which has the following features: abundance and spontaneity. The bleeding which comes from these tumors generally exceeds in quantity that arising from any other condition in the genito-urinary tract, being sometimes so excessive as to fill the viscus with clots, producing vesical tenesmus and urinary retention. This hemorrhage has no relation to exercise or work; it may be the worst during sleep. At the outset the bleeding is intermittent, but it progressively increases in frequency; it may be sufficient to color the entire urine, or if drawn with the catheter the latter half of the stream will contain the larger amount of the blood.

The hardest forms of kidney trouble to differentiate are tuberculous disease of the kidney or of the bladder associated with bleeding. It is well to remember that in tuberculous cases the

bleeding is apt to be more marked early in the disease, while in tumors the hemorrhages grow steadily worse.

While pain is not especially characteristic of bladder tumors, yet it is not increased by movement as in the case of vesical calculi. When the tumor is benign, the hemorrhage generally precedes the pain, while in malignant forms the opposite is the truth. In benign tumors this symptom may never go beyond a mild irritability; but in malignant cases it becomes a prominent feature, often radiating down the thighs or into the region of the sciatic nerve. In rare cases, as is the despair in medicine, the pain may be wholly absent in a case from start to finish.

It is a common experience for the patient to notice bits of the tumor swept out of the bladder by the urine; should such a piece be seen in a fresh state, it will show fingerlike processes floating off from the surface; or even if dried they are much the same. But nothing can be told of the character of the tumor from these segments. It is now necessary to palpate, sound the bladder, use digital exploration and the cystoscope.

The modern method is the use of the cystoscope. Lewandowski, one of the first to use this means of diagnosis, collected early twenty-four cases of tumors of the bladder diagnosticated by the aid of the cystoscope, comprising 12 papillomata, 4 hematomata, 5 carcinomata, 2 fibromyomata, and 1 polyp. All were removed but one carcinoma, the patients recovering, and one carcinoma being followed by return *in situ*. He also gives the following cases of foreign bodies diagnosticated by aid of the cystoscope, and removed either by suprapubic cystotomy, through the urethra by the use of a lithotrite, or by lateral cystotomy: Two entire Nélaton catheters, and the tip of another one; an entire bougie, No. 22; a large pin, found sticking in the bladder wall; a hairpin, in a female; a stone having as its base a silk ligature, and also in the same case a silk ligature that had ulcerated its way from the stump of an ovariotomy into the bladder; and a large part of a sealing-wax sound that had been manufactured and broken off in the urethra by a patient with stricture. All of these cases, he claims, could not have been diagnosticated except by the use of the cystoscope, and are proofs of its great usefulness for this purpose.

To Nitze is due the credit of introducing in 1879 this instrument, and improved by him and others it is now taking its proper place; it was thought at first to be able to settle every question of diagnosis of bladder trouble, but this is too sweeping. The drawback to the use of this instrument is the fact that the bladder is frequently too full of blood or pus to allow of a satisfactory view,

and yet it is just in these cases that the problem is hardest. Try in these cases to examine between the bleedings, or clear up the bladder with the injected fluid.

I have found the directions of Watson the clearest on this subject; they are as follows:

"For the successful employment of the cystoscope the following conditions are requisite, viz.: (1) Clear fluid contents of the bladder. (2) A capacity of at least five ounces. (3) A clear urethra—that is, one which has no stricture, or such form of prostatic hypertrophy as to render the passage of the tube impossible."

ANTITOXIN IN THE TREATMENT OF DIPHTHERIA.

BY W. THORNTON PARKER, M.D., NORTHAMPTON, MASS.

In the *New York Medical Journal* of October 25, 1902, is an item concerning antidiphtheritic serum in scarlatinal angina. Dr. G. Caeceri *(Gazzetta degli Ospedali,* July 13, 1902) speaks of two cases of scarlatinal croup in which he used antidiphtheritic serum with marked success. In the first case the symptoms of impending suffocation, which were due in a large measure to edema of the glottis, were quickly improved by the injection of the antidiphtheritic serum. In the second case there was marked scarlatinal angina which disappeared in a little less than twenty-four hours after the injection of the serum. The author comments on these results by calling attention to the etiological relations between scarlatinal angina and diphtheria.

I am convinced that the treatment of scarlatina with antitoxin is a rational procedure, and that a close relationship does exist between the two diseases.

A valuable editorial in the *Boston Medical and Surgical Journal* of May 2, 1895, concerning antistreptococcic serotherapy, is of especial value in this connection. Cases of erysipelas and puerperal fever treated by Charim and Roger showed prompt amelioration of the general state, the sense of comfort experienced a few hours after the injection, and the speediness of the convalescence.

The work carried on by Dr. Kinyoun of the U. S. M. H. service in the treatment of smallpox with antitoxin, which has demonstrated that it has a modifying effect upon the disease, and especially upon the eruption, is very important evidence that antitoxin is capable of mitigating and even curing severe cases of scarlet fever.

The paper by Dr. Fischer in the *New York Medical Record*

of April 6, 1895, on "Some Practical Points in the Treatment of Diphtheria with Antitoxin," is of great value in this connection. His remarks concerning the application of the remedy will in my opinion apply with equal force if we use the word scarlatina instead of diphtheria. He says: "(1) To apply the remedy as soon or as early in the disease as possible. (2) To inject a sufficient quantity. (3) Remember that the remedy given to us is absolutely harmless. (4) That the same can be used for prophylactic purposes by injecting the one-tenth part necessary for healing an acute case of diphtheria. (5) It is well to remark that although we use antitoxin the patient still requires local treatment of the infected parts; that the use of stimulants and the observance of hygienic and dietetic rules must be strictly carried out; and that, in a word, we must not expect healing wonders from antitoxin alone."

The following case, which occurred in my own practice, is interesting in showing the value of antitoxin in the treatment of mixed infection: D. S——, a child twenty-five months of age, came under my care the morning of April 6, 1896. The case was then diagnosed as scarlatina. The temperature was 103° F. In the evening it had reached 103.5° F. Sunday morning the case seemed to be one of true diphtheria, or else of mixed infection. Sunday at 2 P.M. an injection of antitoxin from the Pasteur Institute, 20 cubic centimeters, was made. The temperature remained the same, 103° F., at the evening visit. Monday morning the temperature had fallen to 101.5°, but in the evening had risen to 103° again. The patient was very ill, and the membrane did not show any signs of breaking down. At 8 P.M. two more injections of antitoxin were employed, and on the morning of the 9th the temperature had fallen to 102°. From this time on there was a steady fall of temperature until convalescence was thoroughly established. The patient was carefully sustained by nutrients—milk, beef tea, and brandy. Antiseptics were faithfully employed in the mouth and on the skin. It was with great difficulty that the disinfection of the mouth could be accomplished in one so young. For the intense restlessness and loss of sleep I used with most satisfactory results a suppository containing:

℞ Ext. hyoscyamus ..... gr. ss.
Ext. cannabis indica..... ..... gr. ss.
Camphor monobrom..... ..... grs. iij.
Lupulin ..... grs. viij.

M. ft. supposit. No. iv. One night and morning.

Antiseptic sponge bathing was used after desquamation had set

in; before that, olive oil with antiseptics was made use of. As an internal antiseptic, tablets containing 1/1000 grain corrosive sublimate were used.

Cultures were taken on the 7th and 8th. Neither culture gave the Klebs-Loeffler bacillus, but good chains of streptococci were present each time.

Of course those who are not willing to accept the theory that antitoxin is valuable in scarlet fever consider its action in such cases to be innocuous.

The case is interesting in showing the value of antitoxin in controlling the fever, mitigating the eruption, and as a general antitoxic agent of remarkable value. I believe that the amount of the injecting fluid can be diminished with equally good results.

The urine showed at times only faint traces of albumin, and was at no time different from the urine usually observed in cases of scarlet fever.

There has been no complication of nephritis or paralysis; the membranes disappeared gradually with the lowering of the temperature.

There is every reason to believe that this case would have terminated fatally under the ordinary treatment of scarlet fever. The prompt employment of the antitoxin arrested the disease in its incipiency.

The action of the antitoxin was observable within ten hours after its first employment.

The conclusion which I presumed to arrive at, and which I reported at the meeting of the American Medical Association (section for diseases of children), Baltimore, Md., was that in the use of antitoxin in scarlatina we certainly have a reliable remedy, and one sufficiently antitoxic in its nature to justify its use. This case I believe is confirmed in its claims by the experience of Caeceri already quoted.

Acting Secretary Darling of the Navy Department has decided that under the law officers of the medical department of the United States navy must be promoted to the next higher grade just as line officers of like dates of precedence are promoted. Medical officers of the navy, upon entering the service, are to be credited with six years, and will take precedence accordingly with the line officers who entered the service on the same date six years previously. In promoting medical officers they are to be advanced grade by grade with such line officers.—*New York Medical Journal.*

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EDITORIAL ARTICLES.

THE INTERNAL SECRETIONS.

On another page will be found mention of a new book by Dr. Sajous, of Philadelphia, on the internal secretions. It would appear at first sight that in the views therein stated there must be something of more than transitory interest. The functions of the ductless glands have for long remained in the realms of speculative physiology, but one by one they have been revealing the purposes of their existence, and the time is ripe for some one to harmonize our present knowledge into a consistent philosophy.

Dr. Sajous regards the ductless glands as part of a glandular system, to which he has given the name of the adrenal system. The adrenal ferment he calls adrenoxin, identical possibly with the glycolytic ferment of Lepine. This he believes to be the oxidizing substance of the plasma. In the muscles this combines with myosinogen, in the nerves with myelin, and in the blood itself with fibrinogen. If this adrenoxin be so important a substance its origin and relation to the ductless glands in general becomes a matter of supreme importance.

The adrenal system was found to be directly connected with the anterior pituitary body, through the solar plexus, the splanchnics, and the cervicothoracic ganglia. This diminutive organ, no bigger than a pea, under this conception becomes the most important organ of the body, and meets all the significance the ancients attributed to it, in being the seat of the soul. All insufficiencies of the adrenal system are attributable to the anterior pituitary body, which is its governing center, and in this source must be found the key to the physiological action of remedies.

A conception of disease is thus originated, one in which all syndromes are due to renal insufficiency. Tuberculosis and syphilis are due to lowered adrenal activity. Stimulate by means

of its own stimulant, iodine, the pituitary body, and syphilis is modified. In other diseases the missing adrenoxin derivative can be named. In typhoid fibrinogen is missing, in diphtheria trypsin, and the dominant constituent of antidiphtheritic serum is said to be trypsin.

Accepting the theory of adrenal insufficiency as a cause of pathological variation, that which may be called immunizing medicine comes manifestly within range of practical therapeutics. It is not perhaps demonstrated that this view is correct, but the concordance established by Dr. Sajous between the different factors entering into the problem appears in itself inferential proof that cannot be denied considerable significance.

From the biological standpoint the ductless glandular system seems to merit the highest importance. Its early evolution as an essential organic entity, and in fact its almost primal differentiation as a nutritional system, indicates that that which has defied scientific analysis for so long probably contains the key to biological problems of profound importance. The views enunciated in "The Internal Secretions and the Practice of Medicine" are at any rate sufficiently novel to excite more than ordinary interest, and will profit scientific inquiry if for no other reason than that they will evoke some dialectic ability to insure their refutation.

EDITORIAL NOTES.

The Nottingham Bill.

The bill recently introduced into the Michigan legislature known as the Nottingham Bill is intended to raise the standard of examination and require all graduates to pass an examination before the State board before being given a license to practice. The bill also favors reciprocity with other States. By the conditions of the measure no one will be allowed matriculation at any college in Michigan unless he have at least a certificate of graduation from a high school or its equivalent. The measure is one that will commend itself to all who have at heart the good of the profession. Michigan has too long been the dumping ground for the products of the poorer medical schools, and unless this or a similar measure be passed in the near future, conditions will grow steadily worse. It is the duty of every medical man in the State to bring to bear such influence as he may possess upon the legislators to make this bill a law.

A New Serum.

V. Tirelli, an Italian bacteriologist, noting the immunity enjoyed by epileptics to septic infection, has been conducting a series of experiments with the view of determining whether or not this immunity is due to an antipyogenic property inherent in the blood. He treated cultures of staphylococcus in the serum obtained from the blood of an epileptic, with the result that the cultures were slower in developing than were central cultures which had been treated with healthy serum. Injections into the veins of animals were made of cultures that had been treated with epileptic serum, and these survived longer than animals which had been injected with control cultures. Dr. Tirelli has certainly opened up a new field in the search for a trustworthy antistaphylococcic serum, as well as thrown light upon the pathogeny of epilepsy.

To Counteract Depopulation.

The French Society of Anthropology has been discussing M. Dumont's proposal, which has in view the social advantage of early matrimony as a remedy against diminution of the population. Let it be supposed, he argues, that the average time of election for marriage be lowered but one year, the number of married people would be so increased that the natality would be raised from 21.9 per 1000 to 26.28—that is to say, 40,000 extra births would result. The statistical consolation to be derived from this may be very comforting, but by what method of persuasion are the French people to be induced to embrace nuptial delights one year ahead of the average time?

The Continued Bath in Mental Alienation.

The fact that baths morning and evening and the application of cold compresses to the head are useful in mania has long been admitted. Kroeplin goes further and advises a continued bath in mania, in the acute delirium of general paralysis, in delirium tremens, and in epilepsy. These baths are given at a temperature of 34° C. and can be given from day to night for months. The patients eat from little tables near the baths, or they read, smoke, or work while in them. During the night the head is supported on rubber pillows. Prolonged baths given in this way were found to have a calmative effect, which baths of shorter duration failed to afford.

ITEMS AND NOTES.

Since the present epidemic of cholera appeared in the Philippines, 125,810 cases have been reported up to March 10.

The Ecuador quarantine against San Francisco has been removed, beginning with vessels leaving that port March 12.

The University of Halle has conferred a gold medal on Prof. J. P. Pawlow, of St. Petersburg, for his research on digestion.

The recently founded German Society for the Prevention of Venereal Diseases held its first congress at Berlin on March 8 to 10.

The Regents of the University of Michigan have appropriated the sum of $3000 per annum to carry on an institute for the treatment of hydrophobia.

Dr. D. C. Hawley, who was graduated from the University of Vermont Medical School in 1884, has been reëlected mayor of the city of Burlington, Vt.

There has been an epidemic of typhoid fever in Harrisburg, Pa., all winter, and it is believed that the disease has been spread through the drinking-water.

The epidemic of bubonic plague in Mexico has decidedly diminished, as there were no new cases at Mazatlan, Villa Union, or Siqueiros, nor any deaths, March 13.

Dr. Ferdinand Crolas, the father of pharmacy in Lyons, died recently. For over thirty years he had taught chemistry and pharmacology in the University of Lyons.

Dr. Henry P. Bowditch, professor of physiology, has recently been appointed to the new George Higginson professorship of physiology in the Harvard Medical School.

The Mexican government, which has taken a deep interest in the Liverpool School of Tropical Medicine since its formation, proposes to grant an annual appropriation to the school.

The architects who will draw plans for the new Bellevue Hospital have been instructed by the Board of Trustees to preserve the exterior plan of old Bellevue as much as possible.

On March 11, William B. Atkinson completed his fiftieth anniversary as a practitioner of medicine in the city of Philadelphia, he having graduated from the Jefferson Medical College March 11, 1853.

Lectures for train men, to be given by Jefferson Medical College, will soon be begun, both the Pennsylvania and Reading railroad companies having agreed to permit their employees to attend the lectures.

Dr. Frederick Mueller, the assistant of Professor Lorenz, has returned to this country, and will take up his residence in Chicago, where he is to have charge of a hospital devoted especially to orthopedic surgery.

On March 12 news was transmitted to the Bureau of Animal Industry, Washington, from Boston, stating that four herds of cattle, aggregating sixty-three animals, had been found near Bedford, N. H., affected by foot-and-mouth disease, and had been slaughtered.

Official statistics recently published show a great diminution in tuberculosis mortality in the Prussian States between the years 1876 and 1901. In 1876 the death-rate from tuberculosis was 31 per 10,000 of population; in 1891 it was 27; in 1896, 22; and in 1901 it was 20.

The death of Professor Panas, of the University of Paris, has deprived the profession of a distinguished ophthalmologist. Professor Panas was a Greek by race, a British subject by nativity, having been born in the Ionian Islands while they belonged to Britain, and a Frenchman by adoption.

The Hamburg Exposition of Milk Hygiene offers thirty-one prizes for the best method of cleaning bottles, for the best contribution on the subject of modifying milk for infants, of keeping milk, sterilizing, etc.; also for popularly worded pamphlets on these subjects. The prizes range from $125 downward.—*Exchange.*

A traveling postgraduate medical school, to visit all the cities of sufficient size and have clinics and lectures by eminent men, is proposed in Germany. The practitioners in the surrounding territory would thus gather for a week or two once a year in their nearest town. Museums, etc., would be carried.—*Journal of the American Medical Association.*

It is stated that Professor Behring, the discoverer of anti-diphtheritic serum, has announced the discovery of a serum by means of which calves can be made perfectly immune to tuberculosis, and which he believes will be equally applicable to human beings. The profession awaits with some interest the outcome of Professor Behring's experiments.—*American Medicine.*

After a Roentgen-ray examination of the Korean twins with a view to ascertaining if it would be safe to attempt their separation, it has been decided by the medical scientists having the case under consideration that no vital structures prevent the separation of the twins. Each twin is normally formed so far as the integrity of his own body is concerned, and they have in common only the flesh and cartilaginous connection which unites them at the base of the sternum.—*Exchange.*

On the initiative of the Empress Alexandria, an orthopedic institute has recently been erected in St. Petersburg. Dr. Horn has been appointed director. The Municipal Council, for some reason, was at first strongly opposed to the scheme and refused to grant a site. Finally, however, it gave a space of 400 meters square in the Alexandrinski Park, and the new hospital will shortly be opened. A Russian millionaire, M. Soldatenkoff, who has been most liberal in gifts of money for the promotion of the arts and sciences, has recently given more than 120,000 pounds for the erection of a general hospital in Moscow for the treatment of sufferers without regard to their religion.

A man named Nordenskoetter was recently convicted and sentenced to three years' imprisonment for practicing medicine in Berlin without a license. He had studied chemistry at a university for six semesters, and after that gained some medical knowledge by serving as a clerk in a drug store. He considered this sufficient training for the treatment of the sick, and by the means of wide-spread advertising he soon gained a lucrative practice. He was in the habit of mixing his medicines in a bath-tub in which his wife "occasionally" took a bath. Before the trial ended he fled, forfeiting his bail of 15,000 marks. He is said to be worth over $150,000. He was assisted by a regular practitioner named Kronheim, who was also up for trial, but who was acquitted.—*Exchange.*

A number of the leading physicians of Philadelphia have met and formed a Philadelphia Society of Tropical Medicine, the object of which is to prepare students of medicine and physicians

for their duties in the Philippine Islands and other tropical countries of the world. No society of this kind has previously been formed in the United States. The founders of the society include the following members of the medical profession: President, Dr. Fenton; vice-presidents, Professors James C. Wilson and James Anders; secretary, Professor Joseph McFarland; treasurer, Professor E. B. Gleason; Executive Committee, Dr. John V. Shoemaker, chairman, and Dr. Fenton, Professor Judson Daland, Dr. R. G. Custin, Professor Orville Horwitz, and Dr. Hobart Hare.—*American Medicine.*

At the meeting of the Paris Academy of Medicine, held on February 3, M. Jousset gave an account of a very original method for the investigation and detection of microbes in effused fluids—as, for instance, in pleurisy, hydrarthrosis, and hydrocele. Hitherto microbes in these fluids have been difficult to detect, and M. Jousset has devised the following method: He collects some of the fluid and allows it to coagulate, during which process the microbes are imprisoned in the meshes of the clot. The clot is then artificially digested, and the resulting solution is centrifugated. M. Jousset has been able by this method to demonstrate the bacillus of Koch in twenty-four out of twenty-five cases of pleurisy, and also in certain cases of ascites which had been attributed to hepatic cirrhosis.

In opening an official course of lectures on naval and colonial hygiene at the University of Naples, February 4, 1903, Prof. Alessandro Pasquale, speaking of the scope and importance of the subject, said that in a country from which there is such an extensive emigration as from Italy it is necessary for the universities to provide instruction on hygiene in relation to the shipping in order that there may be assurance that emigrants and the ships on which they leave may be in a sanitary condition satisfactory to the authorities of the countries to which emigrants go. Not only is it the duty of the country from which emigrants leave to provide for suitable sanitation on the passage, but means should be taken to keep persons physically unfit from emigrating, and to prepare such as do emigrate against the perils of a climate to which they are unused. The course at the university will include instructions in naval construction from a sanitary standpoint, examination of water, air, and food aboard ship, the consideration of air space, disease on board ship, disinfection, quarantine, the examination of personnel, and in short all subjects in which medicine has a practical bearing on shipping.—*Public Health Reports.*

NEW PUBLICATIONS.

THE INTERNAL SECRETIONS.

The volume here presented to the medical reader bids fair to become an important and significant contribution to medical science. Its purpose and intent is very far-reaching, for its fundamental principle is one which strikes at the very foundations of physiological pathology. The insoluble problem mentioned by Foster in 1895 was this: "We cannot trace the oxygen through its sojourn in the tissues. We only know that sooner or later it comes back combined in carbonic acid." Tissue respiration was the dominant factor of this problem. The author of this work determined to follow as a clue to this riddle of physiology the history of the adrenal extractives, whose marked affinity for oxygen has been known. The pursuit of the adrenals brought this investigation into the realm of a philosophy. The key to tissue respiration was to be found in the ductless glands. The secretion of the adrenals was traced to the pulmonary alveoli. Here it endowed the plasma with its affinity for oxygen. The adrenal system under this conception becomes a distinct anatomical and physiological unity; it is a system presided over by the anterior and posterior pituitary bodies. The bearing of such a discovery as this upon medicine, it will be easily realized, is stupendous, and in the action of these secretions the problems of immunity and therapeutics must find their explanation.

It is impossible to epitomize in any but an imperfect way the evidence presented in these pages, and the reader must himself estimate the value of the theory here introduced. The work will be found very interesting, whether it be right or wrong in its interpretation of the facts considered.

The Internal Secretions and Principles of Medicine. By Charles E. de M. Sajous, M.D. Volume I. Forty-two Illustrations. Philadelphia: F. A. Davis Company, 1903.

THERAPEUTICS OF INFANCY AND CHILDHOOD.

There are certain subjects connected with pedological science which seem to possess perennial interest and which make a new edition of a standard work always acceptable. It will probably never be absolutely settled how an infant should be fed, and the digestive tract of the child will long continue to excite parental alarm, and call for the best services of the professional attendant. Dr. Jacobi's work requires no extensive introduction to the professional reader; it is already well known and appreciated. The new edition presents no changes in the actual character, but the revision has led to the incorporation of many additions to its contents. It is needless to say the work is one which cannot be too strongly commended for the sound and practical nature of its contents.

Therapeutics of Infancy and Childhood. By A. Jacobi, M.D., LL.D. Third Edition. Philadelphia: J. B. Lippincott Company.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Sarcoma of the Third Cervical Segment.

Putnam, Kraus, and Park (*American Journal of the Medical Sciences,* January, 1903) give the notes of a case of sarcoma of the third cervical segment ending in recovery after operation, which they believe to be unique, as being the only tumor of the spinal cord in the upper cervical segment hitherto recorded, and which after definite localization was successfully removed without sacrifice of the spinous processes or laminæ, eventually making an uninterrupted recovery. The record is as follows:

Male, aged forty-five, married, without children, temperate, and with good previous history, complained in the autumn of 1900 of occasional sudden sharp pains commencing in the back of the neck and radiating round the neck and up the occiput, lasting from two to five minutes. The attacks gradually increased in frequency from once weekly to several times daily, and on two occasions he lost consciousness. In the intervals he often had dizzy attacks. He suffered from constipation and experienced some difficulty in fully emptying the bladder. In the spring of 1901 he noticed numbness in the left hand, followed by weakness of the muscles of the hand and arm. Some months later the right hand followed suit, and at the end of the year the legs became affected with weakness and disturbed sensation, until in February, 1902, he was unable to walk and his symptoms increased. Coming under observation on April 2, all the reflexes were found to be exaggerated, with loss of control over both rectum and bladder. There were no signs of trophic disturbance, with the exception of a large bed-sore over the sacrum. Below the clavicles all sensation was totally lost, as also motion in the muscles of the left arm and leg; some slight power remaining on the right side. There were no signs of muscular rigidity or contractures. The left pupil was smaller than the right, but both reacted normally to light.

The patient gradually becoming worse, the following operation was performed on April 28 upon the diagnosis of a tumor of the third cervical segment of the cord: Under chloroform, the soft parts having been separated from the posterior vertebral surfaces through an incision extending from the hair line to the vertebra

prominens, the arches of the third, fourth, and fifth vertebræ were divided, and the divided portions removed. The exposed dura was distended and dusky, and upon puncture a jet of cerebrospinal fluid shot up a foot in height, and following upon this relief of intradural pressure the respirations became fuller and increased from eight to eighteen per minute. Upon incising the dura a small reddish tumor (round-celled sarcoma), originating apparently in the pia arachnoid and pressing chiefly upon the posterior columns of the right half of the cord, was removed without much difficulty or hemorrhage, and the wound healed by first intention. The paroxysm of pain disappeared, and ten weeks afterward motion, but not sensation, had returned on the right side, and sensation, but not motion, on the left. Each week, however, showed improvement, though the reflexes remained exaggerated and the urine was still voided involuntarily.

Parotiditis Following Abdominal Section.

An instructive table has been prepared by Dr. Morley (*Amer. Gynec.*, December, 1902) of 51 cases of this complication. Seven cases were in males and 44 in females; 26 were ovariotomies, and the remaining 25 were operations on the pelvic viscera: oöphorectomy 2, hysterectomy 3, "uterine tumor removed" 3, operation for suppurative peritonitis 1, herniotomy 1, operation for intestinal obstruction 1, enterostomy 1, removal of omentum 1, gastrectomy 2, operation for gastric ulcer 1, removal of vermiform appendix 2, operation for penetrating wound of abdomen 1, operation for bullet wound of stomach 1, "abdominal section" 5 (two of these were most probably ovariotomies). Some of the cases entered as "ovariotomies" were probably removal of the ovaries with diseased tubes; thus the author's new case, where a pair of pus tubes were removed with the ovaries and vermiform appendix, is placed under this head. There is no fixed period of incubation; 9 occurred on the third day, 5 on the fourth, 5 on the fifth, 8 on the sixth, and 5 on the seventh; thus the complication appeared between the third and seventh days in 32 out of 51 cases. The remaining 19 cases ranged from the eighth to the twelfth days, excepting 3, where the parotid began to swell on the second day. In 16 cases both glands were attacked, in 15 the right, and in 13 the left parotid glands were specified as the seat of inflammation; in 7 the side was not specified. Pus was present in 20 and absent in 31 cases.

The bacteriology of parotiditis following abdominal section is.

strange to say, very defective, as in a large number of the reports the complication is merely mentioned as an incident in convalescence. The staphylococcus pyogenes aureus was isolated in Bumm's and also in the author's cases; 38 cases recovered and 13 died; pus was detected in 9 out of the 13 fatal cases. Morley maintains that these results justify Stephen Paget's opinion that the deaths were not due to the suppuration of the gland, but the gland suppurated because the patients were going to die.

Operative Treatment of Ruptured Urethra.

A. Groves (*American Medicine,* March 14, 1903) says there are few things more difficult in surgery than the operation required when the urethra has been torn completely in two. Extravasated blood and urine in the bruised and torn tissues render the task of finding the distal end a very trying affair, and he has known the search to be abandoned. Usually, with sufficient practice, the torn end can be found, and in locating it pressure over the bladder will often cause a flow of urine which promptly solves the problem. In one of his cases, after making every reasonable effort, he was unable to locate the opening, and he then made a suprapubic incision into the bladder and passed a catheter from the bladder along the urethra, and in this way accomplished the object. The subsequent progress of the case was entirely satisfactory. When great difficulty is experienced, this will be found an absolutely certain method of overcoming it. The torn ends should be accurately stitched together, the permanent patency of the canal depending upon the healing together of the edges of the mucous membrane. If the edges are not approximated cicatricial tissue will result and a troublesome stricture develop. If the wound in the urethra is properly put together there should be no stricture. In one case in which there was an old stricture which was very tight, the writer dissected out the cicatrix and brought the urethral ends together with good results.

Prevention of Ventral Hernia After Laparotomy.

Hahn (*British Medical Journal,* Feb. 28, 1903) holds that the occurrence of ventral hernia after laparotomy is due not so much to tympanites, as is supposed by some surgeons, as to defective methods of suturing the external wound. The author, who has paid much attention to this subject, describes his own method, which, he states, has been so successful that he has failed to find

a single instance of hernia in eighty-eight cases in which he has performed laparotomy. Special importance is attached to the following details of this method: (*a*) The peritoneal layer, together with the fascia transversalis, should be sutured quite apart from the others layers of the abdominal wall; (*b*) so far as possible aponeurotic and not muscular parts of the different layers should be stitched—the latter when brought together by light sutures are, it is stated, invariably torn through; (*c*) in a corpulent subject the thick layer of subcutaneous fat should be sutured by very fine silk. The author prefers perfectly sterilized silk as the material for sutures. This, it is pointed out, is cheap, can be readily manipulated, is non-absorbable, and remains as if it were a portion of the living tissue. This freedom from any reaction of both buried and superficial sutures, which is due to the strictest asepsis, is regarded as the most important point in the prevention of subsequent weakening of the abdominal wall. The author, recognizing the necessity and also the extreme difficulty of rendering the hands quite clean from a bacteriological point of view, describes a method of washing and sterilizing which has the rather serious disadvantage of taking up nearly an hour.

The Diagnostic Value of Angioma of the Skin.

Rosenbaum (*Münchener med. Wochenschrift,* 1902, No. 16), summing up his observations, comes to the same conclusions as Gebele, namely, that the affirmation of Leser regarding the occurrence of nevi in carcinomatous patients has no basis. He found angioma as often in individuals not suffering from carcinoma as in those who did. He also found a greater number of nevi in those who were not carcinomatous. In 400 cases the occurrence of angioma in early childhood was rare; after the age of thirty they were more frequent in both healthy and diseased individuals, demonstrating that age predisposes to them, which will also explain their frequency in carcinomatous individuals, carcinoma usually appearing after the fortieth year.

Prophylaxis in Chloroform Narcosis.

Feilchenfeld (*Centralblatt für Chirurgie,* 1903, No. 6-7) advises the use of cardiac tonics before narcosis. He administers them only in cases of nervous irritable hearts with normal diffuse impulses and a small, rapid pulse. He gives tincture of strophanthus in doses of five drops with or without tincture of digitalis;

this usually brings about slowing of the pulse and has a quieting effect on the patient. In cases of diseased myocardium, lack of tone, and arrhythmia, infusion of digitalis or hypodermic injections of strychnine may be used; in such cases, however, ether narcosis is to be preferred. In cases of hypertrophy it is important that the narcosis should be supported by morphine injections. In severe forms of myocarditis little is to be expected from prophylaxis, and the threatening danger of the narcosis should always be borne in mind.

MEDICINE.

The Transplantation of Tumors.

Considerable work has been done of late by Dr. L. Loeb (*American Medicine*, March 14, 1903) on the transplantation of tumor cells. The writer says that after transplantation of tumors there does not exist any appreciable period of latency in the growth of the peripheral transplanted tumor cells. They begin to multiply in a very short time—almost at once. Serial sections have shown that apparently separate tumor nodules of sarcoma may be connected by rows of cells. Tumor nodules smaller than a pea which never did expand actively, when examined microscopically after two months show an active mitotic cell proliferation, which is in all probability neutralized by the corresponding destruction of cells. Sarcomatous cells are phagocytic, and may, for instance, take up extravasated red blood-corpuscles. These phagocytic cells may have an appearance very similar to the phagocytes which the author found in the cavity of the Graafian follicles in the first stage of atresia. It is an important problem under what conditions transplantation of normal tissues succeeds; about the conditions under which transplantation of tumors is successful hardly any investigations exist. It is not improbable that transplantations of sarcoma will be shown to be more frequently successful than those of carcinoma, although transplantations of different varieties of carcinoma have been successful.

The result of transplantation of tumor cells as compared with transplantation of ordinary tissues seems to be a conclusive demonstration of the fact that mere displacement of adult tissue, if it performs any rôle at all in the production of tumors (which, however, is not probable), is certainly quite an unessential factor. The fact that no infected fresh pieces of sarcoma can be

successfully transplanted into the majority of animals of the same species proves that a predisposition for the growth of tumor cells is not the main factor which prevents or favors the formation of metastases.

Transplantation of tumor cells through so many generations would seem to prove that the ordinary tissue cells may, under conditions not realized in one organism, be able to live much longer than the individual to which they belong.

The Importance of Examination of the Stomach Contents of Patients Suffering from Chronic Gastric and Intestinal Disorders.

F. F. Ward at a recent meeting of the Medical Society of the County of New York (reported in *Medical Record,* March 7, 1903) presented a paper with this title. He said that the day was long past when the physician's duty, in a case of supposed stomach disorder, was fulfilled by merely prescribing rhubarb and soda. In every obstinate or intractable case, after making the usual examination of the heart and lungs, the general practitioner should note carefully the condition of the liver, stomach, and bowel. There is a certain inverse relationship between the acidity of the urine and that of the stomach. The urine should be tested for indican, as this gives some idea of the character of the digestive process. At the first test-meal examination the main points to be determined are: (1) The quantity of the food in the stomach; (2) whether or not free hydrochloric acid is present; and (3) whether this acid is present in excess. Too much stress should not be laid upon the presence or absence of free hydrochloric acid in making a diagnosis of cancer. A number of illustrative cases were cited.

The Fly as a Carrier of Typhoid—An Inquiry into the Part Played by the Common House-fly in the Recent Epidemic of Typhoid Fever in Chicago.

Alice Hamilton (*Journal of the American Medical Association,* Feb. 28, 1903) says that the epidemic of typhoid fever in Chicago during July, August, September, and October of 1902 was more severe in the nineteenth ward, which, with one-thirty-sixth of the city's population, had over one-seventh of all the deaths from this disease. The concentration of the epidemic in this locality cannot be explained by contamination of the drinking-

water, or of food, or on the ground of ignorance and poverty of the inhabitants, for the nineteenth ward does not differ in these respects from several other parts of the city. An investigation of the sanitary condition of the region shows that many of the street sewers are too small, and that only 48 per cent of the houses have sanitary plumbing. Of the remaining 52 per cent, 7 per cent have defective plumbing, 22 per cent water-closets with intermittent water-supply, 11 per cent have privies connected with the sewer, but without water-supply, and 12 per cent have privies with no sewer connection. The streets in which sanitary arrangements are worst had the largest number of cases of typhoid fever during this epidemic, irrespective of the poverty of the inhabitants. Flies caught in two undrained privies, on the fences of two yards, on the walls of two houses, and in the room of a typhoid patient, were used to inoculate eighteen tubes, and from five of these tubes the typhoid bacillus was isolated. When the discharges from the typhoid patients are left exposed in privies or yards, flies may be an important agent in the dissemination of the typhoid infection.

Achylia Gastrica and Pernicious Anemia.

Max Einhorn (*Medical Record,* Feb. 28, 1903) says that in most cases of achylia gastrica a nearly normal condition of the blood is found.

In one case of achylia gastrica in which at autopsy a total atrophy of the stomach mucous membrane was found, pernicious anemia did not exist during life.

We occasionally observe the presence of gastric juice in cases of pernicious anemia, sometimes even in an increased amount, as is evident from the three cases reported by the author. If pernicious anemia were caused by atrophy of the gastric mucous membrane, the achylia would have to be well marked, as soon as the symptoms of the blood disease are apparent.

We cannot deny that achylia and pernicious anemia may occur together. These cases, however, are in the minority, and would probably point to the fact that there is a common cause for both affections, or that pernicious anemia finds a ready soil in cases of achylia. We must also think of the possibility that in grave cases of anemia (pernicious anemia), in the last stages of the disease, changes may occur in the stomach and intestinal glands (atrophy), just the same as analogous changes in the spinal cord have been observed in this disease.

Syphilis and Life Insurance.

J. G. Brown (*Scottish Medical and Surgical Journal,* January, 1903) suggests the following questions be put to a syphilitic applicant for life insurance:

(1) When did he consult a physician in the matter? (2) What was the character and position of the primary sore? At what date did it first appear? (3) What were the characters and approximate dates of the secondary symptoms? (4) Get a full description of the treatment adopted. What was its duration? (5) Find out how long the applicant has been free from any symptoms of the disease. (6) Have there been any tertiary manifestations? (7) Is he now leading a steady life? (8) Find out his habits in regard to alcohol. (9) Ascertain whether he has any special liability to rheumatism or other constitutional disease. (10) Do you consider this life insurable? If so, do you think an extra rating necessary, and to what extent?

A Case of Diphtheria Complicated by Acute Endocarditis of the Mitral Valve.

J. W. Findlay (*Glasgow Medical Journal,* January, 1903) reports a case of diphtheria complicated by acute endocarditis of the mitral valve, and from its study he concludes as follows: (1) That the child developed endocarditis during an attack of diphtheria; (2) that such a complication is extremely rare; (3) the evidence of bacteriologists suggests, in spite of the fact that the diphtheria bacillus has been found in the vegetations of endocarditis, that this complication probably results from some organism other than the bacillus diphtheriæ itself, which only perhaps predisposes the tissues to succumb; (4) the most probable microbic offender in this case was the versatile and ubiquitous pneumococcus; (5) it is impossible to say how far the serum itself may have been responsible for causing the endocarditis.

Hereditary Syphilis.

R. Matzenauer (*Wiener klin. Wochenschrift,* No. 7) treats in an exhaustive article the question as to whether a paternal inheritance may be demonstrated, and comes to the conclusion that it cannot. He believes that Colles's law has no exceptions, and that cases of this kind cited in current literature which would demonstrate such exceptions are due to errors. Every apparently healthy though immune mother of a hereditary luetic child has

latent syphilis. There is no hereditary syphilis without syphilis of the mother; it therefore follows that the mother of the syphilitic infant, even though she shows no symptoms, should be treated specifically. He advises that a syphilitic man in order to prevent the infection of the woman should not marry before the lapse of a number of years, nor until receiving a number of specific treatments.

THERAPEUTICS.

Abortion of Syphilis by Intravenous Mercurial Injections.

Tommasoli (*Annals de Dermatologie et de Syph.; Journal of the American Medical Association,* March 14, 1903) has been using the intravenous route during the last seven years for the abortion of syphilis, instead of using it, as others have recommended, merely as a last resort. He has thus treated 44 patients, restricting this method of treatment to cases in which the initial syphiloma was diagnosed beyond question, and in which the infection had been contracted less than forty-five days previously. The longer the interval since infection the more energetic the treatment required. He commences with 6 to 8 mg. of sublimate and pushes it rapidly to 14, 16 or 18 mg., repeating the injections nearly every day, and supplementing them with the usual frictions, intramuscular injections of sublimate, calomel, or pills of protoiodide, with brief intervals of suspension of all specific treatment or change to potassium iodide. The strictest hygiene of the mouth and frequent use of potassium chlorate, sodium borate and alum was always successful in curing the slight tendency to salivation observed in a few instances after the first injections. General weakness was occasionally noticed during the course of treatment, and this he combated by hygienic measures and administration of a tonic containing iron, arsenic, phosphorus, manganese, and strychnine. Out of the total of 44, 30 were completely cured of their syphilis, not a trace of secondary manifestations having been observed since. In six others he was equally successful, but was not able to follow the cases as long as he wished and consequently does not include them in his 30 cases of complete cure.

The drawbacks of the method are the occasional painful lumps at the point of the injection, or slight suffusion of blood, phlebitis, subcutaneous edema or erythema. None of these local inconveniences were serious, and they were all due to imperfect technic,

not to the method, and are easily avoided. Another drawback is the metallic taste in the mouth and the salivation. Both were rare and not severe. No stomatitis was observed in any instance. Other drawbacks are a slight degree of general muscular weakness, slight headache, slight fever, very rarely, a general malaise and stomach troubles. None of these inconveniences were serious enough to require suspension of the treatment, and all soon vanished under appropriate accessory measures. No thrombosis, embolism or coagulation was noticed after any of the intravenous injections. His experience justifies the conclusions that intravenous injection of sublimate is harmless, even with the dose of 2 centigrammes. Commenced promptly in the primary period and continued as energetically as possible, followed by a course of the ordinary mercurial treatment during several months, it will positively abort syphilis in a proportion of 80 per cent of all cases. He describes the details of his 44 cases. Some received fifteen injections, others twenty—twenty-three in thirty-seven days, or thirty-two in forty-three days. The total of sublimate injected ranged from a few centigrammes to 17; 28.1 and 31.6 centigrammes. The cases in which this intensive treatment failed illustrate the time limits for its effectiveness. In a young man of nineteen the injections were commenced thirty-one days after infection. Twenty-five injections were made in twenty-nine days, and then eight more after a brief interval. The total injected was 210 milligrammes, with an average of 6 milligrammes at each injection. Larger doses induced headache. No secondary manifestations have developed although several years have elapsed, and no supplementary mercurial treatment was attempted in this case. The syphiloma usually vanished with the sixth to eighth injection.

Diet and Therapy of Chronic Kidney Diseases.

J. Wiczkowski (*Wiener klinische Rundschau,* 1902, No. 16) reports numerous observations of different kinds of diets in kidney diseases, and with other clinicians agrees that the beef as well as the milk and veal diet has the same influence on albuminuria, and that the preference of a milk or white meat diet has not been substantiated. He prefers to give a moderate amount of fats—cold-liver oil, one ounce daily—and notices a decrease in the amount of albumin and a reduction of the edema. Regarding the administration of fluids he believes in the individualization of cases and warns against set rules. In edema he prefers to give but small amounts of fluids. He reports three cases where

venesection had a beneficent influence on the albuminuria. In all cases without internal complications, and in which peripheral arterial tension is high, he advises venesection.

The Treatment of Infantile Convulsions.

The causes of infantile convulsions, according to G. J. Ellis *(New York Medical Journal,* March 14, 1903) are of two kinds, direct and reflex. The direct are the acute infections, in which the initial chill observed in older patients is often replaced by a convulsion; exhausting diseases, such as continued diarrhea; toxic causes, such as drug poisoning and uremia; central lesions, such as tumors, embolism, thrombosis, hemorrhage, meningitis, hydrocephalus, cerebral syphilis, etc.; and diseases of a convulsive character, such as tetanus, epilepsy, and pertussis.

The reflex causes are very numerous, among them being indigestion, intestinal parasites, foreign bodies in the ear and nose, dentition, and mental disturbance, such as fright. Rachitic infants in particular are disposed to an attack of convulsions on the slightest irritation. It is generally impossible to determine the cause while the convulsion is present. The prognosis should be guarded, for though the cause may be trivial, death may occur from exhaustion or from spasm of the glottis.

The warm bath and mustard plasters, applied to the nape of the neck, epigastrium, and soles of the feet, are favorite home remedies. Small time should be wasted on these if they do not act quickly. The best remedy at our command is chloroform, a few drops of which inhaled from a handkerchief relieve almost instantaneously. The intestinal tract should be thoroughly emptied, first by an enema of warm soap-suds, and then by calomel and soda, one-tenth of a grain each, repeated every hour until free purgation occurs. Should the stomach be suspected to contain irritating matter, syrup of ipecac, which is found in nearly every household, may be given. A child one year old may take a teaspoonful every twenty minutes until emesis occurs. Any recurrence of the convulsion is checked with the chloroform. High temperature indicates the application of an ice-cap. Exhaustion indicates stimulants, preferably alcoholic for infants. Muscular twitching or restlessness should be quieted by sodium bromide and chloral. Ten grains of bromide and five grains of chloral may be given in twenty-four hours for a child one year old.

The after-treatment depends on the cause. Any disease should be treated, the feeding regulated, and if no cause can be discovered, the bromide and chloral mixture should be continued.

The Value of X-rays in Cancer.

A. R. Robinson (*American Journal of Surgery and Gynecology,* March, 1903) says that the Roentgen ray is a very valuable addition to our armamentarium for the treatment of cancer.

Some cases of advanced epithelioma are incurable except by the rays.

Many of the cases cured and regarded as inoperable by other means could have been quickly cured in an early stage of the disease, hence physicians should devote proper attention to this serious condition—much more attention than they have as yet given it.

The majority of cases so far reported as cured have been cases that could have been cured much more quickly by the knife or caustics, especially by the latter.

In cutaneous cancer the scar is sometimes better after the ray treatment than after the use of caustics, but for the majority of cases caustics are preferable, as their action is definite and there is a great saving of time to the patient.

In many cases of cutaneous cancer the ray is a valuable agent in combination with other methods, and when the disease is situated around the important blood-vessels it is the only proper agent to employ, except in some cases on the extremities, where amputation would be advisable.

All cases of carcinoma of the breast, except those seen in a very early stage, should be treated by the rays before resorting to the knife. The rays should also be used in all inoperable cases and in cases after amputation has taken place.

According to our present knowledge, the *x*-ray treatment is not curative in internal cancer of any part of the body—mouth, larynx, stomach, uterus, etc.

To obtain the best results there must be no fault in the technique of the operation, in order to avoid a serious burn and to get the desired action on the cancer tissue.

The Treatment of Puerperal Fever.

Dr. Herff (*Correspondenz-Blatt f. schweizer Aerzte,* 1903, No. 2) in drawing conclusions from a number of cases arrives at the following opinion: (1) A local treatment in puerperal fever is not necessary if in the beginning antiseptic douches do not cause an improvement in the first few hours. (2) Curettement of the uterus is useless: (3) Serum therapy with antistreptococcus serum shows occasionally good results. (4) Immobilization of the body is important. (5) Further the involution of the uterus

by giving ergot, etc. (6) Alcohol in large quantities should not be used, and attention should be paid to the general nutrition. He advises the frequent administration of fluid diet, especially milk. (7) For stimulating the heart he recommends the usual stimulants and the early administration of strychnine in fractional doses. (8) Antipyretics are only exceptionally indicated. The author uses collargol in one-per-cent solution intravenously in doses of 10 cubic centimeters twice a day; at times he gained excellent results, although this treatment was without avail when purulent foci were found.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

The Etiology of Acne Vulgaris.

In the *Journal of Cutaneous Diseases* for March, 1903, Dr. T. Caspar Gilchrist, clinical professor of dermatology at the Johns Hopkins University and Hospital, Baltimore, gives the following summary of the results obtained in an investigation into the etiology of acne vulgaris:

1. Definite bacilli, which he names bacillus acnes, were present in all smears taken from 240 typical acne lesions from eighty-six patients.

2. Pure cultures of bacillus acnes were obtained from sixty-two lesions (chiefly acne nodules) from twenty-nine patients, eighty-two cultures being sterile (about seventy of these were sterile because the proper medium was not used), and the remainder showed either a growth of bacillus acnes mixed with staphylococcus pyogenes or epidermis albus, or the latter organism was in pure culture.

3. Sections of an excised comedo, of an early acne papule, of an acne pustule, and of five acne nodules from six patients demonstrated the stages of the disease. The sections from the acne nodules showed quite profound changes extending deep into the corium, surrounding in some nodules a magnified and markedly hypertrophied follicle. The lesion was made up of masses of cells, many giant cells, plasma cells, which were very numerous in some nodules, but not in others, their place being taken by lymphoid cells or connective tissue cells. Very many polymorphonuclear cells were also present, and were massed in some sections so as to form miliary abscesses; numerous phagocytes were

seen, and also many pigment cells, especially in one nodule, where they were in large numbers. The blood-vessels were numerous and dilated. In one section a large group of bacilli acnes were situated deep in the corium beneath the follicle, but in most of the section only a few small clumps or scattered bacilli were found. Some of the giant cells contained bacilli.

4. Bacilli acnes have been shown to be pathogenic in mice and guinea-pigs.

5. Bacillus acnes is present as a short, thick bacillus in the smears, but in cultures it often becomes much longer and thicker; and in old cultures it assumes distinct branching forms. It grows when planted *en masse* on acid glycerin agar, and forms a pultaceous, easily movable mass.

6. By the clumping of bacillus acnes by the sera of patients affected with acne vulgaris it is to be inferred that a specific toxic body derived from the presence of the bacilli in the tissues is absorbed by the blood, resulting in the production of a specific agglutinin.

Systemic Blastomycosis.

In the *Journal of Cutaneous Diseases* for March, 1903, Drs. O. S. Ormsby and H. W. Miller (from the laboratory of Drs. Hyde and Montgomery, Chicago, Ill.) report a fatal case of systemic blastomycosis, with multiple cutaneous and subcutaneous lesions, and give the following *résumé* and conclusions:

(1) The first evidence of the illness which ended fatally in this case was exhibited in the lungs. (2) Early general toxemia was present, as evidenced by fever, weakness, emaciation, etc. (3) The cutaneous manifestations began two months after the initial illness, and were manifestly of internal origin, coming by way of the circulation. (4) These lesions comprised subcutaneous and cutaneous nodules and abscesses, open and discharging or crust-covered ulcers, and were extensively distributed, being as a rule smaller about the face and head and larger on the extremities; the trunk had comparatively few. (5) Pure cultures of blastomycetes were obtained from the subcutaneous abscesses before death, and from various tissues and internal organs post mortem. (6) Microscopic examination both of the internal and external lesions and of the sputum failed to show any tubercle bacilli, but all showed enormous numbers of blastomycetes. (7) Animal experiments were negative as to tuberculosis. (8) Tuberculin reaction was negative. (9) Post mortem examination revealed lungs riddled with miliary abscesses and tubercle-like lesions, the pleura studded

with nodules, the liver extensively filled with miliary abscesses and tubercle-like nodules. The kidney was similarly affected, but not so extensively. The spleen was markedly affected, some portions being practically destroyed. The mesentery was studded with the nodules. In all these situations blastomycetes were demonstrated microscopically and culturally, but tubercle bacilli were found in none. (10) The early lung involvement and other symptoms, the laryngitis, the microscopic appearance of the organs, and the patient's family history, all suggested tuberculosis. (11) The absence of the tubercle bacillus, culturally, microscopically, and experimentally, the negative tuberculin reaction, the absence of the usual microscopic tubercular architecture, the failure to reproduce tuberculosis in animals, the extraordinary number and rapid evolution of the cutaneous lesions, and lastly, the abundance of blastomycetes in every lesion, rule out tuberculosis.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Ovarian Sarcoma Developing from the Theca Externa of the Graafian Follicle.

Russell and Schenk (*American Journal of Obstetrics,* August, 1902) give a pathological report on a sarcoma of the ovary removed by Kelly from a woman aged forty-nine. For three and a half years before operation, and beginning three years after the menopause, there had been irregular uterine hemorrhages. The tumor had a twisted pedicle and rose nearly as high as the umbilicus. The specimen consisted for the most part of small cysts, separated by rather firm trabeculæ with some larger-sized cavities formed by the breaking down of the septa; some of the cavities contained small papillary ingrowths. The stroma was made up of connective tissue, with spindle-shaped cells with long nuclei. The alveoli were filled by round cells with large vesicular nuclei, some which stained homogeneously, while in others the chromatin network could be made out. The cells seemed to have little tendency to invade the stroma. The round sarcoma cells bore a characteristic relation to the Graafian follicles. On examining a small Graafian follicle it was found to be lined "by an almost perfect layer of large cells with large vesicular nuclei, the

cells being characteristic of the granular layer. The outer layer of cells, these forming the theca externa, had more or less completely disappeared, and many of them were indistinguishable from the sarcoma cells which everywhere surround the follicle." From the number of the follicles showing this condition it is very likely that the theca of the Graafian follicle was the starting-point of the tumor.

The Operative Treatment of Puerperal Pyemia.

Sippel (*Centralbl. f. Gyn.*, December, 1902) is induced by Trendelenburg's success in curing a case of puerperal pyemia by ligature of the hypogastric and spermatic veins to draw attention to the fact that in 1894, in a case of purulent phlebitis of the uterus which took the form of an acute pyemia, he proposed to remove the uterus and resect the internal spermatic and uterine veins, though he did not actually carry out this proceeding. Of four cases of puerperal pyemia, two recovered spontaneously; the other two could not for independent reasons be operated on, and both died. Sippel is not inclined to the extraperitoneal method suggested by Trendelenburg, and would only proceed by laparotomy, and having done so would remove the uterus as well as the veins; but many a case of pyemia recovers spontaneously, and operation is not indicated unless life is endangered.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Choroidal Atrophy in High Myopia.

Dr. Salzmann (*v. Graefe's Archiv*, liv 2) lays special stress on the existence of tears or defects in the lamina vitrea of the choroid in this disease. These tears he thinks arise in consequence of stretching. In the atrophic area choroidal vessels have disappeared. Pigment accumulations spring from proliferation of the pigment epithelium. The deeper retinal layers are atrophied and distorted. Changes actually involving the fovea generally occur in later life; the choroidal changes apparently slowly progress long after the myopia has become stationary. The lamina vitrea is supposed to become more brittle in old age.

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ORIGINAL CONTRIBUTIONS.

CONSERVATIVE TREATMENT OF UTERINE DISPLACEMENT.

BY J. M. INGE, M.D., DENTON, TEXAS.

It is not my purpose to oppose operative means for the relief of retrodisplacements of the uterus. But the tendency of the profession in many communities is to submit most all cases presented for treatment to the surgeon for operative interference, such as ventral suspension, ventral fixation, or the Alexander operation—cases that could be in a great measure relieved by a more conservative method, without the risk of the more radical operation, to say nothing of the total failure of a marked percentage of the cases operated upon.

While hundreds of women are to-day enjoying good health as a result of a cutting operation, we find a conflict of opinion as to the merits and demerits of each operation among those high in authority. As an illustration, Dr. John B. Deaver tells us: "I cannot but wonder why gynecologists do such an abominable operation as ventral suspension, and that the operation of ventral suspension and ventral fixation is out of place in the majority of cases. I have seen many cases," he says, "operated upon, and never failed to find six months afterwards the uterus down in the hollow of the sacrum."

On the other hand, Dr. Baldy says: "Of the Alexander operation, it is irrational and dangerous, weakens the points in the abdominal walls, which are already its weakest points, has been the cause of innumerable hernias, and in these cases leaves the patient in a worse condition than before the operation."

It is hardly necessary to say that the operation advocated by each authority is severely criticized by advocates of another method; furthermore, that each one has his pet operation; and while it is true that the failure is often due to want of proper technique, statistics show a good percentage unimproved among the number resulting in absolute cure, as shown in Wood's

report of 212 cases of ventral suspension, with 129 cures, 53 improved, and 30 unimproved. But it is not my purpose to discuss the merits or demerits of the various operations, even if I were ever so competent. However, I will give as my opinion that I believe there are a large number of such cases, especially with complications, that should be dealt with by the knife, and through no other method could we hope to obtain relief. But coming more directly to my subject, I am persuaded there are many cases of retroflexion and retroversion, who are invalids one-third or one-half the time, who can be restored to comparatively good health by the methods of Brandt—that is, massage, by combined manipulation with the hands, practiced almost daily for a period of time sufficient to give results—but who are submitted to the cutting operation instead. I fully realize there are many cases, with complications, such as tubal and ovarian inflammations, especially suppurative conditions, with adhesions, that the manipulative treatment is not only not applicable to, but would be positively hazardous.

There are many cases of long standing with more or less of adhesions without tubal or ovarian complications. Such adhesions can often be loosened by proper manipulation without risk to the patient. Many years ago Brandt's massage treatment for retrodisplacements gave him a reputation limited only by the borders of civilization for the relief he gave womankind. From reports we obtained through the journals from American gynecologists, who called upon him, we were informed that his methods could not be explained. He must be seen to be appreciated. No other living man could have such results, or could learn to accomplish what Brandt did with his methods. Such statements I was ever loath to believe. His method was to elevate the hips well, about forty-five degrees, with the body in a straight line, to allow the intestines to gravitate well out of the pelvic cavity, then with the hips on pillows, with one hand externally above the fundus uteri, buried down to or near the sacrum, and the other with two fingers behind the cervix to lift the fundus upward, while the hand externally pressed the fundus well forward to the symphysis pubis, with finally the fingers in the vagina in front of the cervix, pressing it upward and backward, being cautious to produce only slight pain. With this massage treatment practiced every day—fifteen to twenty minutes every day—for a sufficient period of time, supported after each treatment with a lamb's-wool tampon, and best accompanied by hot vaginal douches at night, in many cases the symptoms disappear. The complications that go with retrodisplace-

ments of course must be treated. Long standing cases are accompanied by endometritis, which is treated by the usual method of dilatation, intra-uterine applications, and when necessary curettage and gauze packing.

But while the treatment given is found in the text-books in the main, many, especially younger practitioners, and those in rural districts who ride over large scopes of country and who are competent men, become discouraged with the above methods when they fail, only because they have not and do not devote the time and patience required for success. Illustrative that good may result from the conservative treatment, I submit the following report:

About six years ago I was called to a lady, about thirty-five years of age, married about twenty years; mother of two children, youngest about seven years of age. Retroversion, fundus pressing upon rectal wall, causing troublesome, constant constipation. A tumefaction to the left and in the cul-de-sac proved to be prolapsed left ovary. No history or symptoms of tubal complications or pelvic inflammation. Slight adhesion from long pressure. Her trouble dated from a fall from a horse about two years before her marriage. Menstruation slightly painful and excessive. Had been treated by various physicians, and a number of supports in the form of pessaries had been used to no purpose. The usual backache, dragging symptoms in the pelvis, and aching down the thighs, as complicate such cases, were with her and kept her in bed a good portion of the time for many years. By almost daily treatment for several weeks, as above given, and using no support except lamb's-wool tampons, at each séance she gradually improved. The womb reduced in size from a state of subinvolution; the slight inflammatory conditions subsided. By adding dilatation and a treatment for the chronic endometritis, as she improved I lengthened the period of time between the massage treatment, until one given only in one or two weeks kept her comfortable. After several months I found it necessary to replace the womb and use massage every two or three months, until symptoms entirely disappeared. She is now in comparatively good health. The uterus does not remain in its absolute normal condition, but the symptoms that kept her a half invalid have disappeared, and she is able to do not only housekeeping, including cooking, but to render as much service as is customary for a farmer's wife. She has been advised several times to submit to an operation to fix and retain the uterus forward.

I have in mind and notes for the report of at least a dozen

cases discharged within the past few months. But they are similar, and the results are much as the one given.

The question is, should these cases have been given the ventral suspension or Alexander operation? I think not. While the womb is placed in its normal position at each séance, it does not remain so except when held by substantial support, only in exceptional cases. But the extreme retroversion and retroflexion are overcome; the surrounding slight chronic inflammation disappears; the symptoms disappear, and the patient is practically cured. I instruct patients to assume the knee-chest position two or three times a day. The malposition of the uterus in such cases would cause but slight trouble were it not for complications. "The importance of retroversion and retroflexion in producing disability and disease is not considered so great as in former years." Dr. Schroeder gives important statistics of 411 cases examined. Of these 117, or 28.71 per cent, had retroversion or retroflexion. As Dr. Davis says, the interesting question is, in how many of these cases did the condition of retroversion and retroflexion cause suffering? Of the 411, 303 had no symptoms referred to the pelvic regions, and among these there were 79 cases of retroversion and retroflexion of the uterus, or 26.7 per cent. The remaining 108 patients complained of pelvic disorders, and among these 39, or 36.11 per cent, had retroversion or retroflexion of the uterus.

I quote from Dr. Davis's article in commenting on the statistics of Dr. Schroeder, which is in accordance with my own limited experience: "That retroversion and retroflexion of the uterus, uncomplicated by disease of the tubes and ovaries, does not materially influence the health of the patient and does not in itself demand treatment; but that there must be no interference with the mobility of the abdominal and pelvic viscera if the patient is to remain in a condition of comfort, and hence the ordinary corset must be discarded and the clothing especially adapted to each case."

THE LYING-IN CHAMBER.*

BY MINNIE C. T. LOVE, M.D., DENVER, COL.

I hope that what I shall say will be understood to be said not in the spirit of biased criticism or any unfairness. There are many new factors in the practice of medicine which he who

*Read before the Colorado State Medical Society, Pueblo, Col., June 24 to 26, 1902.

would benefit his fellow man must take into account, and one of these is woman as a trained physician. I believe she has demonstrated her fitness and capacity for good work in our profession. Something has produced a curious state of affairs in obstetrical practice. Medical men are talking here and there of having trained midwives to attend normal lying-in cases among the poor. Who is to determine whether the case is normal or abnormal until after long hours of suffering on the part of the prospective mother? Why should the office of midwife be recognized in this country now more than formerly? Would it not be infinitely better to attempt to educate the public mind first; to send all lying-in women to properly conducted hospitals devoted exclusively to their care, such institutions being endowed to meet the financial condition of all classes; secondly, regularly employed physicians to attend to those of the poor who cannot leave the home on account of small children, because the mother in the home is a great factor of control, even though she be laid by temporarily; and thirdly, heeding the preferences of a large percentage of women who prefer their own sex, even to the extent of employing an untrained midwife, rather than be attended by one of the opposite sex, and recognize the woman physician in fact as has been done in name? Our profession is too noble a one to even suggest one code for the rich and another for the poor, and obviously no man would compromise on an ignorant, meagerly trained midwife, except one who expected to be called in at the eleventh hour for a surgical delivery. The advantage to the surgeon is more in anticipation than reality, however, because a compensatory fee is rarely forthcoming, and it resolves itself into a case for "sweet charity's sake." There is always a way to be found to cover all cases, and absolutely there should never be any compromise with ignorance or expediency in obstetrical practice. The ignorant poor woman needs much more from her attendant in this critical time than her rich sister, who is favored with a skilled nurse and is protected by all the safeguards of clean, wholesome surroundings.

Not only shall we not tolerate midwives, but in our days of specialists we have come to formulate the belief that no medical man or woman in general practice should attend to the lying-in woman, except in emergency cases. I know there are instances when one is obliged to officiate at these times or forever lose a good family, but this will not justify him in the eyes of his brother physicians in doing so when he is not fully prepared. The public needs educating in this matter as well as in that of fees. In our large centers of population it is easy enough to

say that only the obstetrician and gynecological surgeon shall attend to women during their confinement, but in country practice and small towns it is usually impossible to thus limit medical men. Thus are we ever driven to depart from our ideals and made to realize that there is still some field in medicine for the general practitioner. Undoubtedly very much of the unsatisfactory work done by some general practitioner is due to the timidity which exists on the part of the physician and that of his patient. Respect for her feelings often makes a man yield in things which to him are minor, but which are major to the specialist. For those who wilfully depend upon a solution of bichloride for their hands and instruments, instead of soap and water primarily, I have nothing to say. The preparation of the patient, which can always be trusted to the trained nurse, must in her absence be done by the medical attendant; and just here I would ask, is there any substitute for a thorough scrubbing of the external genitals? Is it enough to prepare a 1 :2000 bichloride solution and direct either the patient or the untrained nurse to give a vaginal douche? Is it not positively harmful except in the rare cases of specific disease of the parturient canal?

I think one of the things I have learned, at the greatest cost to my peace of mind—for although I have been fortunate enough not to have lost by death a parturient woman, I have lost much good sleep for fear I would—is not to allow any hands but my own, except trained hands, to either prepare or care for my patient. The trained woman physician has a very distinct advantage over the man here. The embarrassments frequently caused by the presence of the medical man do not exist, and this is particularly so during the time following labor. The abrasions and stitches when present can be daily inspected, the lochia watched, the uterus and vagina carefully examined at the end of ten days or two weeks, without more ado than taking the temperature. I have confined many multiparæ who had been previously delivered by medical men, and they tell me that they were never examined after labor, never prepared during labor—and this not decades ago, but now. This not alone in country districts, where there would be some excuse for it, but in Denver. The death-rate among lying-in women has been reduced to less than one per cent in hospitals devoted to their care, but not so in private practice, where the mortality reports remain almost where they were twenty years ago. I have no means of knowing except to a limited extent how vital statistics as between the medical man and woman stand in this respect. My personal observa-

tion is that for the reasons stated the record is to the credit of the woman.

The obstetrical fee is another thing to be thought of. I am told that in small towns $10 is about the average. In Denver many practitioners make a charge of $15, the average being about $25. Even to keep in the good graces of the family and keep the family practice, it is not fair to do the most important work in medicine for such paltry fees. It means no care before confinement and none after. It means indifferent work during labor. It frequently means a bad, slow getting up and unhealed tears. It means too often work either for the undertaker or surgeon. Except for charity's sake the fee should not be less than $25, and those who habitually offer to work for less make themselves liable to be classed as cheap men. The low-fee men say they never make but one or two visits. Now, the time I think that a woman needs a physician after she is put to bed is from the third to the eighth day, when secretions are getting scant and blood-clots at the old placental site may be fermenting, or scraps of placental tissue may remain. It is not necessary to wait until one develops a chill and temperature of 104° to wash out the uterus; one degree of temperature means that nature is struggling with some foreign substance, and a timely intra-uterine douche will sometimes save much annoyance. If the accoucheur has done his work well and in a thoroughly aseptic manner, at the confinement he will not be afraid to investigate the pelvis for temperature instead of blaming the breasts and visitors and indigestion, and even the nurse. I have learned that it is unwise to say absolutely that there is nothing left in the uterus after delivery. If we always had normal uteri to deal with I presume the secundines would follow the child quickly and perfectly, but unfortunately such is not always the case. As a matter of fact, I have almost come to believe that the woman who has a curettement of the uterus and thorough irrigation some time during the first week of the lying-in gets up in better shape than she who worries along without it. During twelve years of its use I have blessed the man who invented the sharp curette. I used to be afraid of it, but it has never failed me where its use was indicated. Of course, great delicacy of handling is necessary. One hardly needs to be an athlete to wield the sharp curette successfully and safely.

I believe it is as unwise to discard the vaginal douche entirely as to use the intra-uterine douche without definite indication, but I positively object to the bichloride douche except in rare cases. Hot water, where the nurse can be trusted, or lysol solu-

tion, is grateful to the patient, and where there are any abrasions aids in the healing process. Again, we are brought face to face with Dame Nature and should realize that uninfected excretions and secretions should not be interfered with.

Before closing these desultory remarks I wish to say a few words about the patient. There is a growing tendency of late years for women to read books treating of maternity, the diet during pregnancy, the clothing, the things to avoid, things to do. The absolute nonsense and twaddle which one finds bound up into books for the delectation of woman is appalling. Probably one called Tokology has done as much harm as any of them. Great stress should be laid here, to my mind, upon the duty of the physician to impress upon all pregnant women that although pregnancy and labor are strictly physiological incidents in the life of woman, her present mode of life is not always conducive to the normal functionating of all the organs of her body, and therefore as we are no longer living in a state of nature she should very early in pregnancy place herself in the hands of a specialist, where possible, either man or woman, and follow instructions. Those instructions should be, as we all know, a hygienic life, comfortable clothing, nourishing food, plenty of outdoor exercise, some definite occupation. Fears as to what to look at and what to avoid should be peremptorily allayed. It is too late after conception takes place to decide what the child is going to be. It will be the sum of the salient points, either good or bad, of many ancestors. The modification of these tendencies will come postnatally and not prenatally.

The tendency of the present day is very disturbing in the mental poise of the conscientious prospective mother. She is told she must do this and mustn't do that by supposedly well informed people, until her mind is actually distracted. Of all the emotions which rule human life, fear is the one which gives the physician the most trouble. So it should ever be our endeavor, as trained, well equipped physicians, to allay all fears by telling facts wherever possible. There are certain things necessary; for instance, the urine must be watched, the bowels kept free, pelvic measurements taken in primiparæ. For the rest, no moping or worrying, but cheerfulness and courage, should mark the mental attitude of the pregnant woman. I sometimes wonder if women bring all their fads and notions to men physicians as they do to women: the particular kind of grease, for instance, with which to rub the abdomen to make the labor easy, choice old goose grease being highly esteemed by many; shall they stop eating meat, etc. If women could be preg-

nant and not know it for about seven months, it would be a good thing. I tell them to forget it and be natural. We must take something on faith in this day and age, and as the old dame has had a good many years' experience in developing fetuses, I believe she can be trusted, at least by the human incubator. The doctor is another proposition; so that he knows when to trust her, and when not, is all that is necessary.

As there is nothing in life which calls for so much of self-sacrifice and long enduring patience as motherhood, so also there is no branch of our profession which requires the skill, patience, sympathy, and endurance which maternity work entails upon the practitioner. Only thoroughly scientific work can be accepted, and were it not that sometimes "fools rush in where angels fear to tread," these remarks would have no *raison d'être.*

SUICIDE IN CHILDREN.

BY C. C. MAPES, LOUISVILLE, KENTUCKY.

The question of suicide in children has received but slight attention from medical or other writers, available literature being strangely barren of information on this important subject. Unquestionably there are numerous child suicides every year, and that such occurrences are increasing in frequency also appears true; but the reason therefor, or the incentive thereto, is not easily determined.

That a child should commit *felo de se,* under any circumstances or conditions, is difficult to comprehend. The act cannot be attributed to temporary mental aberration, as is said to be so frequently true in adults, for children are not (except in the rarest instances) the subjects of insanity in any of its various phases. It cannot be because of marital or domestic difficulties, for children (fortunately) are exempt from these. Financial failure or other monetary difficulties cannot be held accountable, for children are incapable of sufficiently profound appreciation of disaster of this character to suggest such an act. Illness can hardly be classed a determining factor, for child suicide (so far as the writer can ascertain) has never occurred during the course of acute or chronic disease. Religious excitement cannot be considered a causative factor, for children are not religious fanatics, and as a rule do not become sufficiently enthusiastic to render them susceptible to emotions which, under these circumstances, beget suicidal tendencies. Poverty is certainly not entitled to consideration as an incentive, for children are unable to appreciate its significance in a degree which will induce self-

destruction. The intensity of the loves and hates of children is insufficient to suggest either of these as a cause of *felo de se.* The same statement is also true of pride, shame, remorse, dishonor, misfortune, pain, etc., any of which sometimes actuates the suicide in adults.

Reasoning by the process of exclusion, therefore, it would appear that the actual determining causes of self-destruction in children are extremely few in number. In the opinion of the writer there are but three sufficiently prominent to merit serious consideration, which may be stated in the sequence of their importance as follows: (1) Suggestion or example (*i.e.,* a newspaper account which the child has either read or heard discussed relating the minutiæ of a recent suicide); (2) grief, anger, and desire for revenge, because of some real or imaginary wrong (*e.g.,* corporal chastisement by parent or teacher, or even severe reprimand for some misdeed); (3) jealousy, envy, and humiliation.

It is scarcely to be believed that child suicide would result from either of the latter causes without the pernicious influence of the former, and the daily press is therefore regarded as the primary and principal determining factor, or incentive to the act, while the latter are merely contributing or predisposing causes.

It has been claimed that in every instance of child suicide there is a hereditary transmission of some mental defect (which the writer interprets to mean an inherent suicidal tendency), but the truth of this assertion does not appear to be substantiated by facts. It is perhaps entitled to consideration as a theoretical proposition, but something more tangible than theory is necessary as a basis for the formulation of logical conclusions.

Ogle says few would imagine that one out of every one hundred and nineteen young men who reach the age of twenty years died ultimately by his own hand; yet such is the case. One out of every three hundred and twelve girls who reach the age of fifteen ultimately dies by her own hand, statistics showing that not quite three males kill themselves to one female, and that it is common in all periods of life, excepting in the very young; but the percentage of suicide in young persons of both sexes is higher than generally supposed. Many cases have been recorded between the ages of five and ten years. Ogle further shows that child suicide is apparently of more frequent occurrence on the Continent than in the British Isles.

In an article* published several years ago the following state-

*Notes on Suicide (C. C. Mapes). Medical Age, Detroit, Mich.

ments appear: "While this article was being prepared two attempted suicides in female children under thirteen years came to the writer's notice. Both were for trivial causes; the means employed in one being rat poison, in the other arsenic, which had been kept in the house for the extermination of vermin."

A question of vital importance occurs in this connection—*i.e.*, what part did the daily press play in these two cases? Possibly the children had read or overheard older members of the family discussing such matters, and not understanding their full import, decided, under the stimulus of some real or imaginary trifling wrongs, to test the efficacy of the poisonous drugs.

En passant, it is interesting to note, in considering the possible influence of the daily press as an incentive to suicide, that the Medical Society of Berne, Switzerland, made the suggestion that an act be formulated forbidding all press notices of suicides, inasmuch as it has been repeatedly observed that *felo de se* epidemics arise from suggestions afforded by reports of the sensational general press.

In the contribution referred to* the writer stated that in a neighboring city a man, being despondent, out of work, and tired of life, committed suicide by swallowing a quantity of carbolic acid. The morning paper published the customary two- or three-column account of the unfortunate circumstances, with flashing double "scare" headlines—chiefly gratuitous on the part of the ingenious and imaginative reporter, life being extinct when the suicide was discovered, so that the *facts* were absolutely unobtainable. What was the result? In this same city, during the next succeeding seventy-two hours, five additional human lives were cut short by identically the same method, plus in some instances additions outlined by the reporter, the subjects ranging in age from nineteen to sixty-five years.

Is not, then, the assertion warranted, that the depressing effect of the glaring, published account of the first suicide upon the morbid and impressionable minds of the additional five prompted them to end their existence and to adopt the same means? And may we not also assume that in the first instance the man in a fit of despondency was actuated to the deed by having read in the daily press the report of a suicide by similar measures?

Many other instances might be cited as additional evidence that suicide has undoubtedly been actuated by the daily press, but further illustration seems unnecessary.

It has frequently been remarked that suicides "come in

Loc. cit.

schools," following the same identical methods, whether aided by pistol, knife, noose, poison, or what not; and if the influence of the daily press in promoting the same is what it appears or is assumed to be, is it any less criminal because intended to minister to appetites depraved? Is not the public press thereby guilty of a degree of murder? Can it be doubted this is the influence that causes suicides to so frequently follow each other in quick succession, especially when it is found the death-dealing method, and even the anatomical region attacked, are identical in each instance? Surely such instances are of too frequent occurrence to be considered merely a matter of coincidence.

From a statistical point of view it is of the greatest importance (were it possible) to ascertain just what percentage of suicides can be traced to examples depicted in the public press. The writer is impelled from his studies of the subject to conclude that the number so influenced is very large, though at present he is able to present no accurate estimate. Of course, for reasons already stated, the number of adults so actuated to commit the act of *felo de se* must be infinitely greater than children. but the pernicious influence upon the latter should not be underestimated, nor should it be allowed to pass unnoticed.

The act of self-destruction is heartily condemned by the majority of people at the present day, although a few maintain that, under certain conditions, it is not only justifiable but logical, proper, praiseworthy, and honorable; the latter, however, it may be said, represent a considerable minority.

As the subject demands attention from several points of view—medicolegal, moral, sociological, etc.—it may not be uninteresting to interpolate an abstract from the statutes of one of our foremost States which bears purely upon the legal side of the proposition:*

Section 173. Although suicide is deemed a grave public wrong, yet from the impossibility of reaching the successful perpetrator, no forfeiture is imposed.

Section 174. A person who, with intent to take his own life, commits upon himself any act dangerous to human life, or which, if committed upon or towards another person and followed by death as a consequence, would render the perpetrator chargeable with homicide, is guilty of attempting suicide.

Section 175. A person who wilfully, in any manner, advises, encourages, abets or assists another person in taking the latter's life, is guilty of manslaughter in the first degree.

Section 176. A person who wilfully, in any manner, encourages, advises, assists or abets another person in attempting to take the latter's life, is guilty of a felony.

*Penal Code, State of New York.

Section 178. Every person guilty of attempting suicide is guilty of felony, punishable by imprisonment in a State prison not exceeding two years, or by fine not exceeding one thousand dollars, or both.*

The law further states that it is not a defense to a prosecution under Sections 175 and 176 that the person who took, or attempted to take, his own life was not a person deemed capable of committing crime.

From a legal standpoint it would seem that it is a punishable offense either to attempt self-destruction, or to in any manner abet or assist another in committing suicide; the law makes this very plain, but it does not define the means by which such assistance may be rendered.

The point it is desired to emphasize is, that the daily press is undoubtedly responsible for a large percentage of suicides, by virtue of publishing the minutiæ of such crimes, even the anatomical region attacked, etc.; yet record of a single instance cannot be found in which the secular daily has been arraigned as an aider or an abettor, nor has the writer heard such a procedure suggested. Is it not the intent of the law to punish all alike? If, then, the effect upon the morbid mind of a despondent individual of a glaring published account of a suicide is sufficient to cause such individual to commit the act of self-destruction, is not the secular daily culpable? Without the suggestive published account, the person might not have committed the deed. Surely this is a legal question which should be carefully investigated.

In the opinion of the writer the secular press should by some means be prevented from publishing reports of suicides, as well as other kindred crimes; and if the present laws are inadequate they should be so amended as to meet the indications; moreover, when so amended they should be enforced to the letter, making examples of all publications that refuse to eliminate such reports from their columns.

Obtainable statistics of all civilized countries are said to show a gradual increase in the percentage of suicides. No country or nationality appears to be entirely exempt, though few cases of self-destruction are recorded in the history of the Hebrews, and it has always been rare among Persians and Turks.

By far the greatest number of suicides, according to available statistics, occur during the month of June, with May and July next. No adequate explanation why June is the selective month for *felo de se* has thus far been suggested.

*If the writer is not mistaken a later statute specifies penal servitude five instead of two years for attempted suicide.—C. C. M.

Dr. Justin Herold, of New York, says that many curious cases of self-destruction have come to his notice. Among recent suicides the youngest was twelve years of age (sex not stated). Statistical reports confirm the fact that suicide is common at all periods of life, even in childhood. The greater number of cases occur between the ages of twenty and thirty years, though the years preceding and immediately succeeding the age of puberty show a slight increase.

Suicide is comparatively infrequent up to the age of fifteen, but there can be no doubt that the idea of self-destruction frequently enters the heads of the young. There are cases on record of children who have committed suicide because teachers have been inclined to censure or punish too severely. Children are quickly hurt in their moral sensibilities. They have been known to commit suicide in passion as well as in sorrow.

A case is reported of a boy who committed suicide because his mother refused to buy him a squirrel to which he had taken a fancy. Another did so because he was sent supperless to bed for having broken his mother's watch. He felt particularly hurt because, while he was always punished for his misdeeds, his sisters were generally overlooked. Another destroyed himself because his bird died, and another because he was twelfth in his class.

Trashy novels and all kinds of unwholesomely sentimental literature are a very important predisposing cause to suicide in this country. They produce a morbid condition of mind which unfits people for realities (Herold).

Numerous cases of child suicide have come to the writer's notice during the past few years, a few examples of which are given below, the youngest being three years of age. It is believed this is the youngest case on record. Ogle mentions four instances in which children between the ages of five and ten years took their own lives. It is interesting to note that in all cases of child suicide the apparent predisposing cause is trivial.

Case 1.—J. McS——, three years of age, in a fit of rage because his mother rebuked him and petted his younger brother, threw himself into a tub of boiling water and was so badly scalded that death soon ended his suffering. The two children were playing about the floor while their mother was at work in the kitchen. They quarreled while the mother was passing through the room carrying a foot bath-tub filled with scalding hot water; this she deposited on the floor and took the younger child in her arms. She wiped the tears from the face of the younger child, and upbraided the older for quarreling with his

little brother. J., a weak, nervous child, burst into a passion of sobs and threw himself into the tub of boiling hot water. The upper part of his body was parboiled, and he died in great agony a few hours later.

Case 2.—Because she could not go shopping with her parents, E. H——, aged ten years, committed suicide by swallowing carbolic acid. It was about Christmas time, and the father and mother refused to allow the child to accompany them when they went to purchase Christmas toys.

Case 3.—M. G——, a girl, aged fifteen, in a fit of despondency because a near relative had been taken to an insane asylum, committed suicide by taking strychnine.

Case 4.—F. W——, a boy aged twelve years, held in jail awaiting transportation to the State Industrial School, hanged himself to a stovepipe in his cell with a rope made from his bedsheeting. The boy had been heard to say that he would rather be dead than be sent to the industrial school.

Case 5.—W. D——, a girl aged fourteen years, besides suffering from one of the rarest of diseases, known as paramyoclonus multiplex, is afflicted with a mania to commit suicide. This is the most interesting of the hundreds of cases at the city hospital. When admitted the girl declared she wanted to die, and refused to take food. After persuasion by the attendants she again takes nourishment. Strict orders have been issued to the nurses not to allow her to get hold of instruments with which she could do herself injury.

Case 6.—A. H——, a boy aged ten years, committed suicide by shooting himself. A newspaper clipping giving an account of the suicide of an uncle by identically the same means, a few months previously, had been in the boy's hands before the deed was committed, and undoubtedly preyed on his mind to the extent that he determined to take his own life.

The writer has made no attempt on this occasion to present an elaborate dissertation on the subject of suicide in children, his prime object being to indicate a hitherto apparently overlooked pernicious influence in the causation of child suicide, viz., the example afforded by glaring, exaggerated minutiæ of other instances of *felo de se* published in the secular press.

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EDITORIAL ARTICLES.

ALCOHOL AS ALIMENT.

A recent essay on the part of the eminent French chemist Duclaux has had a somewhat disturbing effect on the minds of many to whom the alcohol problem is an important one. Basing his assertions on certain American research work, this eminent chemist has maintained that alcohol not only is not a poison, but that it is a food, which must be placed alongside sugar and starch, which substances it surpasses in alimentary value weight for weight. He continues his praise of alcohol by maintaining that this substance will shortly enter into all dietetic rations, and that we ought to make excuses for the obloquy we have heaped on the heads of those who in the past have dispensed this valuable food.

Such conclusions have a rapid circulation, and a leading chief of a factory has stated that his employees who had been convinced by the antialcoholic crusade of the harmfulness of this substance, now fortified by the dictates of science, are again frequenting the bars and saloons. The question is therefore one which has a profound sociological significance, and it is wise to consider on what grounds that which is condemned one day is recommended the next.

It would appear to be Atwater's work which has been the disturbing factor in these matters. The word "food" is the one which has passed with magical suggestiveness and upset conclusions previously arrived at in good faith. Atwater's experiments were concerned with the number of calories liberated by healthy men on a diet excluding alcohol. He found that alcohol furnished these calories, or as Duclaux states the fact: "In the alimentary régime of three heavy men it has been possible without inconvenience to replace butter, vegetables, and other analogous foods by alcohol in the form of wine or spirit."

Alcohol weight for weight can liberate more calories than other alimentary substances. This is the point which the public appreciates. In travel or under strain the substance which at least weight will furnish the greatest amount of energy is the one possessing obvious advantages. The calculation is simple: to liberate 100 calories it needs 24 grammes of sugar, 28 grammes of grain, 150 grammes of potatoes, or 150 grammes of milk. This can be done by 17 grammes of alcohol. This, however, is absolute alcohol which would burn and injure the digestive organs, so the traveler would have to provide for the dilution of the substance he carries. Even then alcohol would not possess the merit of fat. Twelve grammes of butter would furnish the energy of 17 grammes of alcohol. Then, too, when we consider the bulk of alcohol, even as brandy, which is 55 per cent absolute spirit, 24 grammes of sugar would be an equivalent in energy-producing results; so the traveler might consider this as the German army does, which simply tells the soldier to put a few lumps of sugar in his pocket, and this with excellent results.

The whole question is however something more than one of producing calories. Should we conclude that alcohol is a food, it is only so in this sense of producing calories, and it is costly and dangerous. If its use is suppressed we may have to replace it by other substances, and if we take at our repast a little more butter and sugar we can undoubtedly completely abandon the use of alcoholic beverages.

EDITORIAL NOTES.

Quackery in Germany.

That quacks find a fertile field for their operations in Germany has been disclosed by recent revelations of the Berlin police. In that city alone the police have on their lists no less than 600 people who are preying upon the public with quack nostrums. So serious has the situation become that a society has recently been organized in Berlin for the purpose of conducting a campaign against the charlatans. The organization will endeavor to enlighten the public in regard to the damage inflicted on health and purse by the practice of charlatans, and also to instruct the public in the proper care of the sick. Public lectures on both subjects are to be held, and examples of the damage done by quacks will be cited. Already the society has been successful in

prosecuting a number of the quacks, some of whom have been sentenced to prison and others heavily fined. Such a condition of affairs is rather a sad commentary on the German people, who have always prided themselves on being intellectually superior to every other nation.

The Seating of Schoolchildren According to Vision.

One of the most important subjects in regard to school hygiene is that of the proper seating of schoolchildren according to their ability to see. This unfortunately has not received the attention in this country that it deserves, and in consequence we are constantly called upon to attend children suffering from nervous and other troubles, the origin of which is undoubtedly eye-strain. A systematic examination of the eyes of schoolchildren at certain intervals would be of great benefit to those suffering from defective vision. This, combined with care by teachers in allowing near-sighted pupils seats near the blackboards and windows, would be the means of keeping in school many children who otherwise would have to drop out on account of poor health.

A Sanitary Holiday.

A bill is now before the Illinois legislature which provides for the establishment of an annual holiday, when houses, offices, factories, stores, theaters, and public buildings shall be swept, dusted, scrubbed, and disinfected. It is proposed to call this day "Health Day," and those who fail to observe it in a manner satisfactory to the health authorities will be fined. Should this measure become a law, it will meet the approval of the medical profession as a great help in preventive medicine.

The Antiquity of Castor Oil.

A French savant, Professor Larit, alludes to the frequency with which seeds of the castor oil plant are found in Egyptian tombs. Some of these recently discovered at Thebes could not be less than 3000 years old, and were perfectly preserved, the oil which they contained being simply rancid. Larit has translated an ancient papyrus which goes to show that the uses to which the ancient Egyptians put the oil were much the same as nowadays.

ITEMS AND NOTES.

An epidemic of grip is reported at Yale University.

The plague situation in Mazatlan, Mexico, has improved greatly.

The number of plague cases throughout India is steadily increasing.

The island of Trinidad is suffering from an epidemic of smallpox.

The present epidemic of measles in London is more fatal than in previous years.

The Marion Sims-Beaumont Medical College is reported to have been purchased by the St. Louis University.

Surgeon-General Van Reypen states that there are twenty-seven vacancies in the grade of assistant surgeon in the United States navy.

By a special act of Congress, Major William C. Gorgas, surgeon U. S. army, has been promoted to colonel and assistant surgeon-general.

The Fourth Pan-American Medical Congress, which was to have been held this year in Buenos Ayres, Argentine Republic, will not be held there.

The tenth congress of the Polish Physicians and Scientists, which was to meet in Lemberg, Austria, in July, 1903, has been postponed until the same month in 1904.

The offer of Andrew Carnegie to defray the expense of the new filtration plant at Cornell University, Ithaca, which will amount to about $150,000, has been accepted by the university.

The American Academy of Medicine will hold its twenty-eighth annual meeting in the large banquet hall of the Arlington Hotel, at Washington, D. C., on Monday and Tuesday, May 11 and 12.

Dr. Louis Heisler Ball, of Faulkland, Delaware, who was recently elected to the United States Senate from Delaware, is the second physician in active practice to become a member of the United States Senate.

The Commissioner of Health of the City of New York has announced in interviews in the daily press that he expects that the department will have ready for the coming season a curative serum for the treatment of cholera infantum. It is stated that the serum is practically ready now.

The thirteenth annual congress of French alienists and neurologists will be held at Brussels, August 1 to 8, 1903. The subjects announced for discussion are "Catatonia and Stupor," "Histology of General Paralysis," and "Treatment of Agitation and Insomnia in Mental and Nervous Disease."

The American Association of Life Insurance Examining Surgeons will hold its next annual meeting in New Orleans on May 4 under the presidency of Dr. C. Lyman Greene, of St. Paul, professor of physical diagnosis in the University of Minnesota, and author of Medical Examination for Life Insurance.

The Paris Académie des Sciences recently voted for a foreign associate member in the place of Virchow. The names proposed were: Robert Koch of Berlin, Agassiz of Harvard, Langley of Washington, and Van der Vals of Amsterdam. Koch was chosen, having received 26 and Agassiz 18 votes.—*Exchange.*

The tests made by Dr. Hibbert Winslow Hills, bacteriologist of the Boston Board of Health, on the value of formalin injections to arrest bacterial activity in the body as advocated by Dr. Barrows, indicate that solutions to be efficient must be sufficiently strong to destroy tissues, and hence are impracticable. —*Journal of the American Medical Association.*

Graduates of an institution of osteopathy, requiring four courses of five months each, are now eligible to practice osteopathic medicine (?) and osteopathic-surgery (?) in New Mexico, but are precluded from using drugs or performing major surgical operations under penalty of committing a misdemeanor. This is the outcome of a five-year conflict between the New Mexico Medical Society and the osteopaths.—*New York Medical Journal.*

The Coroner Abolition Bill, as explained by the representatives of the County Medical Association, shows what a fifth coach-wheel the coroner is. His investigation into the cause of death is properly the task of the health department, and his investigation into the criminal aspect of a death is properly the function of the district attorney. The abolition of the coroner will be true political reform.—*New York Sun.*

A PLAN is under advisement which will change very materially the course of instruction at present followed in the Medical Department of Columbia University. The new policy will closely follow the methods now used at Johns Hopkins and Harvard medical schools. A committee on the revision of the curriculum is reorganizing the course. One of the first institutions to go is the system of quizzes, which has been necessary in the past, owing to the failure of the college authorities to provide for adequate class-room reviews and recitations.—*Medical Record.*

THE California State Senate Committee, appointed to investigate the conditions connected with the influx of consumptives to California from the Eastern States of the American Union, and the proposed establishment of a State institution for the care of such patients, has decided to recommend to the legislature certain enactments restricting the coming of such persons to the coast. It was also decided not to support the plan for establishing a home for consumptives, the committee believing that such a move would result in encouraging tuberculosis patients to come to California.

THE twelfth annual convention of the Association of Military Surgeons of the United States will be held in Boston May 19 to 22 next. The president of the association, elected at the eleventh annual meeting at Washington last year, is Brigadier-General Robert A. Blood, surgeon-general. The committee of arrangements consists of Captain Miles Standish, Lieutenant-Colonel W. H. Devine, Lieutenant-Colonel Otis H. Marion, Major C. M. Green, and Lieutenant F. L. Gibson. Besides the official meetings, at which the governor will deliver an address, Dr. H. O. Marcy will give a luncheon at his residence. The secretary of the association is Major J. E. Pilcher, U. S. A.

FROM Chicago comes the news of the death of a man only 5 feet 10 inches high, yet weighing 480 pounds. It is said that he was so broad that he could not enter the turnstiles of the elevated railways in Chicago or the Illinois Central Railroad. The only surface cars in which he could ride were those having double sliding doors. To make him a complete suit of clothes required twelve yards of cloth, and underwear large enough for him was not manufactured in the United States. Everything he wore was therefore made to order in Europe. His hat was No. 12. The furniture provided for his use was made with special care, on account of his great weight.—*Exchange.*

It is stated by *American Medicine* that the plan proposed by the subcommittee of the Senate on the Pacific islands that visited Hawaii last year for the establishment of a national leprosarium on the island of Molokai is meeting with determined opposition from the inhabitants. The legislature has even passed a remonstrance, which is expected to influence the President against the measure. Some even urge the complete abandonment of the colony planned, claiming that leprosy is gradually subsiding with the progress of civilization, better hygiene, etc. On the other hand, those in favor of the leprosarium claim that within certain limits leprosy is a curable disease. Hence the necessity for a leprosarium where the disease can be promptly and scientifically treated.

The latest statistics show a marked diminution in the death-rate and in the number of emigrants from Ireland during the past year. All other statistics, however, show the great decrease which has been continuing for years in the population of Ireland. In 1824 there were over seven million inhabitants in Ireland, in 1845 over eight million, while in 1901 the population was a little under four million and a half. In 1902 the population was decreased by 17,756, showing a diminution in fifty-six years of almost four million people. Among the other statistics noted during the past year were the excess of births over deaths, 21,857; the loss by emigration, 39,613; the number of illegitimate births 2593, only two and one-half per cent of the total for Great Britain. Out of a total of 79,119 deaths only 1263 were attributed to insanity.—*Philadelphia Medical Journal.*

The Ray bill, making a diploma from a high school or college necessary to enter the second year of a medical college in Pennsylvania, which has already passed the House of Representatives, has been so amended by the Senate as to read, "Provided that graduation from a literary college of good standing after two years of scientific work in the college shall be accepted by the medical council of the State of Pennsylvania as an equivalent for the first year in a recognized medical college, provided that it is accepted by the medical college as dealing adequately with chemistry, physics, physiology, anatomy, and the biological sciences." The bill was vigorously opposed by representatives of the smaller colleges of the State. There seems no doubt that it will pass as now amended. Had the bill been passed in its original shape, it would have sent many medical students out of the State, since it would have barred their entering the second year of most of the large medical schools.—*Philadelphia Medical Journal.*

NEW PUBLICATIONS.

DISEASES OF THE STOMACH.

A third edition having been demanded in so short a space of time is in itself a fact which testifies to the great value of Professor Max Einhorn's treatise on the diseases of the stomach. The new edition has been thoroughly revised. The book is one which will be of the greatest use to the general practitioner, as it provides complete dietetic and medicinal measures for the management of all diseases of the alimentary tract. There is no doubt that this work will continue to enjoy the popularity it has so well deserved in former editions.

Diseases of the Stomach. A Text-book for Practitioners and Students. By Max Einhorn, M.D. Third Revised Edition. New York: William Wood & Co.

DISORDERS OF METABOLISM.

Professor von Noorden's second treatise deals with nephritis. His views on this question are essentially at variance with doctrines usually laid down in text-books. The author has by actual experience refuted many established beliefs. He has shown that dark meats are not better than light ones, that milk is not necessarily the best diet in nephritis, and that the ingestion of fluids needs to be restricted rather than encouraged. Von Noorden indeed rides roughshod over much that has hitherto been considered beyond contradiction. His therapy is in accordance with his newly established beliefs. Clinicians will find this a refreshing study, and cannot fail to imbibe some of the teaching the author so well knows how to impart.

Clinical Treatises on the Pathology and Therapy of Disorders of Nutrition and Metabolism. By Carl von Noorden. Part II: Nephritis. Price, $1.00. New York: E. B. Treat & Co.

YEAR-BOOK OF PRACTICAL MEDICINE.

The last number of this excellent series is on Gynecology. The volume is a careful résumé of practical literature in this field for the past twelve months. The volume is well illustrated, and will serve its purpose of keeping the practitioner well informed in all branches of the department of medicine.

The Practical Medicine Series of Year-books, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Vol. IV, Gynecology. Edited by Cornelius C. Dudley, A.M., M.D., and William Healy, A.B., M.D. Chicago: The Year-book Publishers.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Gastrointestinal Perforations and Their Diagnosis.

J. G. Connell (*Journal of the American Medical Association,* April 4, 1903) says that the previous attempts at an early and accurate diagnosis of perforation of the gastrointestinal tract without opening the abdominal wall have not been adopted.

There has been practically no improvement in the method of diagnosing such conditions during the past century.

The treatment of the perforation *per se* during the last century has progressed to a state bordering on perfection when compared with the older methods.

The diagnosis of gastrointestinal perforations is one of the most important unsolved questions in the domain of abdominal surgery.

There is no pathognomonic sign or symptom or group of signs or symptoms of perforation.

The only positive method of arriving at a diagnosis to-day is to either perform an exploratory laparotomy or await the development of a peritonitis.

To await the development of a peritonitis will reveal the diagnosis too late for the most effectual treatment.

Exploratory laparotomy as a routine measure will of necessity result in some cases being needlessly exposed to the many dangers of a major operation.

Exploratory laparotomy is not a harmless procedure.

The consensus of opinion is in favor of exploratory laparotomy as a choice between two evils.

The fact that even the most expert clinicians fail to diagnose perforation in all cases, and even diagnose such a condition when it does not exist, shows the great need of improvement in diagnostic methods.

The diagnosis should be arrived at before the treatment of the perforation is completed by the presence of a peritonitis.

The injection of air or normal salt solution into the peritoneal cavity and withdrawal of the same for examination will do no harm. Such a procedure will in many instances reveal a perforation before any sign or symptom of peritonitis exists.

The treatment of the perforation *per se* is simple and satisfactory.

The treatment of the complicating peritonitis is multiple and unsatisfactory. The best treatment is prophylactic—*i. e.,* early diagnosis and repair of perforation before peritonitis has become established.

Prognosis of Fractures of the Skull.

At a recent meeting of the Berlin Surgical Society, H. Graf (*Medical Press,* March 11, 1903) spoke upon this subject. The material for the address was furnished by ninety cases treated at the Charity Hospital. Seventy-seven of the cases were men and thirteen women. Concussion of the brain was present in nearly all the cases after the cessation of the original unconsciousness. There was usually a stage of hallucinations; at and after this a subsidence of all symptoms. The total mortality was 28.31 per cent, whilst before this it had generally been somewhat higher. Meningitis was rare, and this the speaker thought was due to modern treatment (avoidance of washing out, probing, etc.), or the meningitis might be very late after the injury. In fifteen cases there was mental disturbance, in which alcoholism played a considerable part. Symptoms of clot were rare; they showed themselves as aphasia, paragraphia, convulsions, in part of the Jacksonian type. Disturbance of taste was observed twice, flow of fluid from Steno's duct once, associated with facial paralysis. Headache was an almost constant symptom; giddiness was also frequent, especially under certain conditions, as when the head was thrown back. In eleven patients there were labyrinthine symptoms, in seven vomiting, in three mental weakness, the "amnesie retrograde" of the French. There was also occasionally change of character, partly of an irritable, partly of a melancholy type. In twenty cases there was deafness of a nervous kind. The pathological examinations of the brain had shown various changes, mostly of a diffuse kind.

Suture of the Patella.

At the meeting of the Paris Society of Surgery, held on February 18, M. Quénu (*Lancet,* March 14, 1903) gave an account of some researches which he had made into ordinary methods of suture of the patella. These methods he affirmed had not much inherent strength. By using a simple apparatus he had been able to exercise traction upon sutured patellæ by means of weights.

In a patella sutured in the ordinary way a weight of 43 kilogrammes brought about a slight separation of the fragments,

while a weight of 70 kilogrammes separated the fragments by one centimeter. When the broken patella was united by the wire being made to run around the fragments, 6 kilogrammes brought about a slight separation, and 20 kilogrammes a separation of one centimeter.

M. Quénu accordingly was of opinion that flexion is a dangerous movement in a case of fractured patella, and that a patient who has fractured his patella should take the greatest care not to walk too soon, for a simple movement of flexion exerts a tractive force upon the fragments equal to a weight of 100 kilogrammes.

Finally, M. Quénu brought before the society a special method of suture of his own which he termed "transverse suture." The wire is passed through both fragments transversely in the shape of a U. This method gives a firmer union than "cerclage," but one not so firm as the ordinary method. When the fragments are more in number than two, or being two only one of them is very small, the wire can be passed through the tendon in either the upper or the lower fragment, thus making a "hemi-cerclage;" and M. Quénu added that he had employed this method with success in the case of a woman aged sixty-three years.

M. Lucas-Championnière considered that the ordinary method of suture gave the most satisfactory results. He asked whether M. Quénu's results were applicable to cases of fracture in a living subject, for he had employed healthy patellæ in his experiments, whereas a patella which breaks is always in some way altered from the normal.

Surgical Hints.

The following surgical hints are given in the April issue of the *International Journal of Surgery:*

In very large foul sores the application of a charcoal poultice, after thorough preliminary irrigation, is often of great value.

No laparotomy patient will suffer very severely from thirst if given an enema of a pint of warm saline solution every three or four hours.

In a case of amputation of the uvula a neurasthenic patient for some time presented most alarming symptoms of dyspnea and partial asphyxiation.

A surgeon should always pay much attention to the condition of a patient's nervous system. Some cases of neurasthenia present the most annoying train of symptoms after operations, in which the slightest point of annoyance is magnified into a matter of extreme importance.

If a patient has an attack of faintness while sitting in a chair, cause him to bend forward for a minute with his head nearly between his knees. This causes a marked tendency to cerebral congestion, and is often quicker and more convenient than pulling him to the floor and letting him lie flat on his back.

If possible, whenever you have to make an incision in the scalp, keep the blade of your knife in a direction parallel to that of the growth of the hair. For instance, at the back of the head, a transverse incision should be obliquely through the scalp, as this will cut through the smallest possible number of hair roots and cause the smallest amount of scarring.

The hypodermic injection of brandy, whiskey, or sulphuric ether is one of the best methods of combating intense shock and collapse, but the surgeon should always remember to inject them deep into the muscles, as they may cause sloughing of the skin if injected beneath it, and they should not be introduced in the neighborhood of any important nerve, as they have been known to cause paralysis or neuritis.

Lipoma Arborescens.

Seven cases of lipoma arborescens are reported by C. F. Painter and W. G. Erving (*Boston Medical and Surgical Journal,* March 19, 1903). Tuberculosis or arthritis deformans has, according to these writers, been mainly held responsible for these fatty growths in the joints. These diseases, according to the authors, should be held responsible for fewer cases than has been supposed. In none of the reported cases was the tuberculous process found. This is important from the standpoint of surgical treatment, for without the presence of tuberculosis the fatty bodies are only a mechanical impediment in the joint, and no erosion or resection is indicated. The clinical picture presented is that of a more or less swollen joint without signs of acute inflammation, and most commonly without excess of fluid. The patient complains of imperfect function, usually without pain. The joint sometimes locks in a partially flexed position, and can be straightened only after considerable effort. The lipomas vary greatly in size, reaching often that of a good-sized hen's egg. They are attached to the synovial membrane by a pedicle, usually slender, which on cross-section is found to consist almost wholly of blood-vessels lying in a mass of small round cells. In consistency they vary from a soft fatty to a tough fibrous condition, both varieties being often found in the same specimen, while the color varies from a yellowish-gray to a dark purplish-red.

MEDICINE.

The Relation Between Uric Acid Excretion and the Destruction of Leucocytes.

At a recent meeting of the Pathological Society of London, O. K. Williamson (*British Medical Journal,* March 7, 1903) read a paper on this subject.

Previous workers had arrived at divergent conclusions. Horbaczewski showed the fact experimentally, whilst of clinical observations, those of Kuhuan alone carried conviction. Isolated observations of uric acid excretion and of the white blood count at a corresponding time were of less value than continuous observations extending over a considerable period of time showing the corresponding variations. The observations recorded were therefore carried out on the latter lines. The object aimed at was to determine whether an increased destruction as opposed to a diminished production of the white blood-corpuscles was followed by an increase in the excretion of uric acid. This increased destruction would seem to be taking place, first, when a fall in the white corpuscle curve was followed by a rise in the amount of phosphoric acid excreted; secondly, a diminution in absolute number of the older forms of the white corpuscles, the young cells not correspondingly diminishing, would also point to an increase in destruction. If, however, the young cells diminished markedly in number this would indicate a diminished production. In order, then, to determine the times of increased destruction, daily estimations of the amount of phosphoric acid excreted in the urine were made, and corresponding to the daily white blood counts, differential counts from stained films.

Eleven patients, most of them suffering from pulmonary tuberculosis, were chosen for the observations, which were in tables and curves. It was found from an examination of these: (1) That in nearly every case in which a rise of the phosphoric acid curve followed a fall in the white corpuscle curve, this rise corresponded with a rise in the uric acid curve; (2) that in the majority of cases confirmatory evidence of increased destruction could be obtained from a study of the differential counts; (3) that in those in which there were sudden and marked variations in the white corpuscle curve there were similar variations in the curves of uric and phosphoric acid; (4) that in the case of children the amounts of uric acid and phosphoric acid excreted were

relatively greater than in adults, and that the rises in the curves of phosphoric and uric acid followed more rapidly on the fall of the white corpuscle curve than in the case of adults.

A Case of Banti's Disease, with Diffuse Productive Nephritis.

An interesting case of Banti's disease is reported by Dr. Field (*American Journal of the Medical Sciences,* March, 1903).

There are, says the writer, four conditions more or less closely related, which may be distinguished as follows: Enlargement of the spleen, with anemia and the later development of a cirrhotic process in the liver, may be separated from cirrhosis of the liver, with secondary enlargement of the spleen, by the fact that in the latter condition the spleen never attains the size that it does in the former. Both these conditions may be separated from splenic anemia and primary splenomegaly by the presence of the cirrhosis of the liver, while these two latter conditions may only be differentiated from one another after a microscopic examination of the spleen.

The case here reported should be placed among those termed "Banti's disease" for these reasons: (*a*) The very great enlargement of the spleen; (*b*) the presence of a cirrhotic process in the liver; (*c*) the fact that the enlargement of the spleen was due to a general hyperplasia, but more especially of the connective tissue.

The present case, exhibiting an advanced chronic productive nephritis, somewhat extends the scope of the pathological anatomy of Banti's disease.

Speculation as to the etiology of the disease seems at present premature, but the increasing recognition of the occurrence of transitional cases connecting together Banti's disease, splenic anemia, and diffuse cirrhosis of the liver, suggests an origin from a common cause emanating from the gastrointestinal tract.

The Etiology of Sporadic Cretinism.

Jonathan Hutchinson (*Polyclinic,* February, 1903) in an article on English cretinism comes to the following conclusion:

"A problem of great interest for us is the explanation of sporadic cretinism in England. Why should it happen that every now and then a child is born either without a thyroid or with the gland in a state of atrophic inefficiency? We may perhaps gain some light by taking note of the facts as observed in Switzerland.

There it is well known that the cretins are usually the offspring of goitrous parents. The water of certain wells produces enlargements of the thyroid. These enlargements are often of very great size, but are not associated with any tendency to myxedema. Yet the children of those who have suffered from them are liable to be born with glands defective in function, and thus to develop the myxedema of childhood—that is, to become cretins. Now in England goitres are comparatively rare and very seldom of large size. I am not aware whether any collection of facts has as yet been made in England which would enable us to connect sporadic cretinism with parental bronchocele. There are many facts, however, which give support to the belief that there must be a connection between the two. Amongst the laws of hereditary transmission, there is probably one under which disease of any viscus, whether structural or functional, occurring in a person about to become a parent, may lead to defective development or even absence of that viscus in a child."

Cyclic Vomiting in Children.

T. C. Ely (*Journal of the American Medical Association,* March 28, 1903) says that he wishes to emphasize the importance of being watchful, on one's guard for the vomiting of this gastric neurosis, distinguishing it particularly from bilious vomiting and the vomiting of kidney disease and reflex vomiting, as of brain disease. Three cases are reported by the author in children of gouty and neurotic history. These cases point to a toxin allied to the uric acid series as the possible blood irritant causing the vomiting. The writer says it is important in severe cases to use hypodermic injections of morphine and atropine in conjunction with elimination by high saline enemas, by gavage, and in extreme cases hypodermoclysis and even intravenous injections of saline solutions.

The Plantar Reflex in Epilepsy.

Tests for the plantar reflex were made by J. M. Kernston (*Journal of the American Medical Association,* March 21, 1903) on thirty-five insane male epileptics, and include 1700 observations at varying intervals between seizures in order to establish a norm for each individual, 1088 tests made immediately after seizures, as soon as clonus had ceased, and a similar number of tests made an hour later. In these 35 patients the individual intervallary reflex was found to be of the normal type—flexion of toes

on both sides—in 10 cases; there was a marked extensor response (Babinski) in 7; no response whatever in 2; and in the remaining 16 cases a mixed response—*i.e.*, right flexor, left extensor, 5; right flexor, left negative, 5; right extensor, left flexor, 2; and in 4 cases an irregular response, sometimes extensor, or varying mixtures of flexor, extensor, and negative in one or other foot, with no predominant type. The percentages were: flexor response, 28.57 per cent; extensor response (Babinski), 20 per cent; mixed response, 45.71 per cent; and entire absence of response in 5.71 per cent.

The plantar reflex presented even more variations from the normal type in tests immediately after cessation of clonus and one hour later.

Cryoscopy.

Cryoscopy, according to D. S. Grimes (*Philadelphia Medical Journal,* March 21, 1903), cannot replace, but only supplement, the older qualitative tests and microscopical examination of urines.

It is probably the most delicate test we possess in detecting and estimating the effect of therapeutic measures directed toward cardiac and kidney lesions.

It permits of reasonable accuracy in diagnosing renal insufficiency and the type of renal lesion present, though the examinations should be prolonged over a number of days; our conclusions coinciding with Lindermann's.

Uremia cannot be diagnosed from the examination of the urine alone.

Cryoscopy of the urine from each kidney, obtained by ureteral catheterization, and especially when supplemented by the phloridzin and methylene blue tests, becomes a very delicate and reliable test in determining a unilateral kidney lesion and the degree of insufficiency of the affected kidney.

Because of an insufficient number of cryoscopic examinations of the blood, we cannot criticize the "interchange" theory of Koranyi.

The Special Susceptibility of Children to Tuberculosis.

P. M. Pottenger (*New York Medical Journal,* March 21, 1903) says that tuberculous infection is very common in early childhood. A large proportion of those patients who, although infected, do not show acute symptoms during childhood, develop active tuberculosis in later life.

In seeking the cause of this frequent infection, aside from the habits of the child and the carelessness of the parent in bringing it in frequent contact with the bacillus, all those things which lower vitality at this time must be considered; and he would call special attention to the fact that there is a connection which seems more than coincidence in the time that tuberculous infection takes place and the time that the child is most apt to suffer from catarrhal conditions of the stomach and bowels.

More attention should be given to the care and feeding of children, so that their systems may be resistant to infection.

All tuberculous children, whether they have lesions in the glands, bones, lungs, or any other part of the body, should be treated for their disease.

Hemoptysis as an Initial Lesion in Tuberculosis.

F. Reiche (*Zeitschrift für Tuberculose*, Bd. 3) says it has long been known that consumptives with initial hemoptysis usually resort to a cure earlier and generally show a better prognosis. Reiche brings some statistical material to verify this statement. He saw for an insurance company up to the end of 1902 about 2000 consumptives, of which 9.2 per ct. had an initial hemoptysis. He selected from these the most completely cured—*i.e.*, those who after twelve months evidenced no sign of the disease—and found that the percentage of those having an early hemoptysis was greater amongst the cured than amongst the total number of cases. The condition is this: the hemoptysis is the signal for early treatment, thus favoring a good prognosis, though repeated hemorrhages are of themselves deleterious.

Anatomical Demonstration of Spontaneous Cure of Tubercular Peritonitis.

Borchgrevink (*Deutsche med. Wochenschrift*, No. 3, 1903) reports a case of a young girl suffering from an endocarditis followed by a long continued peritonitis, which was demonstrated to be tubercular by guinea-pig inoculations of the fluid. The peritonitis healed. Four years later post-mortem showed a caseous gland to be the starting-point of the pericarditis, with a resulting synechia of both surfaces. The peritoneum was thickened with organized exudate which showed no tubercles. The liver was atrophied. Tubercular changes were evidenced in a small degree in the tubes, uterus, and pericardium. The tubercular peritonitis was spontaneously cured.

THERAPEUTICS.

A Contribution to the Treatment of Tuberculosis.

S. Arcangelo (*Gior. quindic di Med. e Chir.*, No. 57, 1902), sanitary officer of the town of Comiso, Italy, reviews briefly the treatment of tuberculosis. He admits that the hygienic and dietetic treatment is of the utmost importance, that drugs alone will not conquer this fatal malady; but he recognizes that drugs play an important rôle as auxiliary agents, and that they are indispensable in the majority of cases. Creosote in small doses has given him good results; he prefers to give it in combination with iodoform, balsam of tolu, benzoin, or extract of gentian (in pill form). Guaiacol he uses internally in the form of guaiacol carbonate; it produces no symptoms of intolerance or gastric irritation, but he does not obtain with it such good and rapid results as he expected. He also uses guaiacol externally, painting the chest with a five-per-cent solution of guaiacol in tincture of iodine. The thorax is divided into four parts, and each day one part is painted and covered with gutta-percha tissue to prevent too rapid evaporation. The results of this treatment have been very good; the fever and the cough diminish, the expectoration becomes more mucous, etc. It has, however, one serious inconvenience—it often produces a too sudden lowering of temperature, with profuse sweats and threatening collapse.

The ideal of creosote therapy has, in the author's opinion, been attained in thiocol, or guaiacol-sulphonate of potassium. This guaiacol derivative is soluble in water, is odorless, and practically tasteless, and is remarkably innocuous, as it can be given up to 90 grains a day without producing the least systemic disturbance. He has used the drug in a number of cases, and always with satisfactory results. He reports in detail the case of a youth of twenty, of delicate constitution, and a hereditary disposition to tuberculosis, in whom an examination of the sputum showed the presence of an abundance of tubercle bacilli, associated with pyogenic cocci and various bacteria. In this case a course of thiocol treatment produced a practically complete cure. A physical examination showed a normal respiratory murmur over the entire respiratory area, except one spot of about three inches in diameter, corresponding to the left scapular region; there the respiratory murmur was completely abolished, giving the impression of an absolute pulmonary atelectasis. An examination of the expectoration made again after one month of thiocol treatment showed great

diminution of the tubercle bacilli, and the associated bacilli had entirely disappeared.

The author's opinion is that creosote and its derivatives, among which thiocol occupies a prominent place, have a distinct antitubercular action, and in order to obtain the latter it is not at all necessary to give dangerously high doses. The best results may be obtained with small doses frequently repeated and faithfully administered over a long period.

Adrenalin Chloride in Epithelioma of the Eyelid.

Wilbur B. Marple, of New York City (*Medical Record*, Aug. 23, 1902), reports a case of epithelioma of the eyelid in which a cure was obtained by the use of solution adrenalin chloride. The growth was of six years' standing. It was situated on the left lower eyelid, and its removal had been advised. A small portion of the tumor was incised and subjected to microscopical examination, revealing its true nature. The growth appeared quite irritable. Solution adrenalin chloride was prescribed, to be instilled into the eye every evening. The effect of the application was such that the condition became less irritable, and eventually disappeared entirely. The author says: "A note received from the husband said the medicine had cured his wife entirely. This proved to be almost literally true. I found along the margin of the lid previously occupied by the epithelioma a clean, indrawn cicatrix, with the lashes of course all gone. The patient reported that she had used the adrenalin solution regularly for three months, after that irregularly, finally ceasing altogether. At first little brown scabs or crusts formed upon the outer surface of the growth. These fell off spontaneously or with the least rubbing. As the crusts came away the mass became smaller, until it practically disappeared. During all this time adrenalin was absolutely the only remedy used in her eye by the patient. I am sure the result is cosmetically better than would have followed the use of the knife."

The Modern Treatment of Urethral Stricture; Dilatation.

At a recent meeting of the New York County Medical Association, Dr. J. W. S. Gouley (reported in *Journal of the American Medical Association*, March 28, 1903) opened the symposium on the modern treatment of urethral strictures with a paper on their

treatment by dilatation, laying down the following propositions: (1) Strictures at the meatus, being ordinarily dense, require incision; (2) strictures in the scrotal region which are narrow, indurated, resilient, and refractory to treatment require internal incision; (3) strictures which render catheterism difficult or dangerous ordinarily require internal incision if in the scrotal region, and external incision if in the perineal region; (4) strictures in the perineal region which are narrow and complicated with fistulæ, and accompanied by masses, require external incision; (5) strictures in the perineal region complicated by abscess or extravasation of urine require immediate external incision; (6) traumatic strictures in the perineal region require early external incision; and (7) other urethral strictures are generally amenable to dilatation, or at least divulsion.

In the early stages of strictures due to urethritis a permanent cure could be effected in a few months by simple dilatation, but in the long standing ones months or even years of dilatation would be required. Continuous dilatation or the retention of an instrument for a few hours, or even for one or two days, is indicated in narrow strictures which fail to yield to ordinary dilatation or are complicated by retention of urine. Rapid dilatation, or the increase of the caliber of the urethra by three or four numbers at a sitting, is indicated in narrow strictures which threaten to produce retention of urine.

The Dietetic Treatment of Tuberculosis.

The chief problem in the dietetic treatment of tuberculosis is, according to D. Porter (*Journal of Advanced Therapeutics,* November, 1902), first to overcome the general malnutrition, and next to establish a higher grade of local nutrition at the infected foci.

The composition, digestibility, and percentage absorption of the various foodstuffs and the oxygenating capacity of the system are accurately known.

By this knowledge the quantity of food taken can be accurately adjusted, so that the full heat production and constructive utilization of the proteids is secured.

The oxygenating and carbon dioxide excreting powers of the system must not be exceeded if the best results are to be secured.

By following these accurate laws systematically a perfect diet can be arranged, and the abnormal and pathological conditions can be changed to the normal, physiologically speaking.

The most difficult problem to contend with in the dietetic management of tuberculosis is the loss of appetite and the inability on the part of the system to digest and utilize perfectly a sufficient quantity of proteid material to maintain life and at the same time repair the damage already wrought.

When this is accomplished, a large percentage of tuberculous patients are rapidly and permanently cured, more so than by medical treatment or simple climatic changes.

A universal adherence to these laws through a century might result in a complete eradication of tuberculosis from the human species.

Serum Therapy of Morbus Basedowii.

Dr. Otto Lanz (*Münchener med. Wochenschrift,* 1903, No. 4) performed a thyroidectomy on a number of goats for the purpose of using the serum or milk as a serotherapeutic agent. He found that the use of the milk in one patient produced an improvement in the general condition, and after its discontinuance the symptoms became aggravated. He also reports four other cases which showed decided improvement; in one, a woman thirty-eight years old, the tremor disappeared, the stuttering, rapid speech became normal, the pulse of 120 to 140 a minute was reduced to 80, the abnormal thirst was relieved, the body weight of 98 pounds increased to 126 pounds, and the exophthalmos was not so decided, though the struma of the neck remained about the same. This improvement he attributes to the milk therapy. The other three cases improved in about the same manner. So far the reports of the serum therapy in Graves's disease have been encouraging and warrant a continuance of the same.

Trunecek's Serum and its Value in Disturbed Cerebral Functions Caused by Circulatory Changes.

A. Gordon (*Philadelphia Medical Journal,* March 21, 1903) says the combination of inorganic salts known under the name of Trunecek's serum may be a valuable remedy in some cases of disturbed cerebral function caused by circulatory changes.

Not only by hypodermic and intravenous administration, but also internally this remedy may give favorable results.

When the iodides, nitrites, and other means used in such cases are without avail, Trunecek's serum should be given a trial. Sometimes a combination of both may be necessary.

Several days, at least a week, must elapse before the desirable results can be expected.

Finally, there are cases in which the remedy is absolutely useless.

The Blood-serum Therapy of Dysentery.

Kruse (*Deutsche med. Wochenschrift,* No. 1, 1903) after many experiments succeeded in procuring a serum which protected guinea-pigs from the action of the dysentery bacillus. The dysentery bacillus is one which the author claims to have discovered, he being the first to isolate it. The employment of this serum on the human subject has been so far limited to 100 cases, and a definite conclusion cannot be drawn. Apparently the fatality, the intensity of the process, and the clinical symptoms were modified. The amœba dysenterica when treated with this serum was naturally not affected.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Influence of Adenoid Vegetations on the Bodily and Mental Development of Children.

Wilbert (*Deut. med. Woch.,* Feb. 5, 1903) has studied the condition of the posterior nares of schoolchildren, and inquired into the bodily and mental development of those affected. In all, he was able to examine 375 boys, whose ages ranged between six and one-half and twelve and one-half years; 231 of them showed some hypertrophy of the postnasal tonsil, giving a percentage of 62; 33 per cent of the boys showed some pathological changes referable to the vegetations; 5 per cent showed nervous disturbances; and 27 per cent were affected in their hearing. In summarizing these results, he points out that in about half of the cases of hypertrophy of the posterior tonsil he could find definite changes. The number of children affected nervously he believes is too low, as only the more severe forms would be detected. He goes on to deal more minutely with the ear cases, and finds that 16 per cent of the boys could not hear whispered speech at a distance of one meter. With regard to the mental condition, he finds that of the 26 children who were described as bad scholars, 22 had adenoids, and that of the 84 boys forming the bottom 12 in each class, 65 suffered in this way.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

The Role of Toxins in Inflammation of the Eye.

R. L. Randolph (*Johns Hopkins Hospital Bulletin,* March-April, 1903) says that bacterial toxins, so far as tested, when instilled even for many hours into the healthy conjunctival sac, were found incapable of producing inflammation or causing other injury.

The same toxins when injected into the tissue of the conjunctiva or into the anterior chamber invariably set up local inflammation, the extent and intensity of the inflammation varying to some degree, according to the species of bacterium yielding the toxin.

Bacteria which have not previously been proved to produce soluble toxins were found to produce them even in young cultures, and it is suggested that injections of bacterial filtrates into the eye, particularly into the conjunctival tissue, constitute a more delicate biological test for the detection of certain toxins than the tests usually employed for this purpose.

The experiments recorded in this paper furnish additional examples, in a comparatively new field, of the importance of toxins in explaining the pathogenic action of bacteria, and likewise emphasize the etiological significance of injuries of the covering membrane of the eye in favoring the action of toxins and of bacteria.

Spasmus Nutans.

Dr. Swoboda (*Medical Press,* March 25, 1903) at a recent meeting of the Vienna Medical Society showed two patients who presented this curious spasmodic condition of the eyes, the etiology whereof, according to Raudnitz, is persistent use of vision in imperfect light. These two children, it seems, lived in a house where the supply of light was very defective. Their ages were respectively seven and thirteen months, from which he argued that the young eye was constantly fixed on one point. He pointed out that there was no symptom of rachitis, and that the affection soon disappeared when the patient was admitted into hospital, where the light was diffuse and sufficient.

Kassowitz remarked that both the children to his mind suffered from craniotabes as well as rachitis. In one, the child aged

thirteen months, the fontanel was still open over the area of half a crown. Spasmus nutans was, he said, well known to be frequent in such patients.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Curettage in Puerperal Infection.

A. W. Lea (*Journal of Obstetrics and Gynecology*, February, 1903) discusses curettage of the uterus for puerperal infection. The curette may be used either (1) to remove retained fragments of placenta or decidua, or (2) to remove as far as possible the mucosa of the uterus when this is infected. In the first case a blunt curette only is needed, and Galabin and Jellett amongst English authors both permit the operation, though Galabin disapproves of it as routine treatment. For the second a sharp curette must be employed, and the operation is a more serious one. It is disapproved of by English authorities and the majority of German and American ones, both because of the accompanying danger and the impossibility of completely removing the infected tissue. The dangers attaching to the use of the curette are: (1) Risk of perforation. This has doubtless often occurred, but can with care be avoided, and is therefore not a weighty objection. (2) Danger of air embolism. This seldom if ever occurs if curettage is deferred until after the third day of the puerperium. (3) Profuse hemorrhage. This can always be controlled by a hot douche and gauze packing. (4) Impossibility of complete removal of the infected area of the endometrium. (5) Risk by causing generalization of the infection. This is the greatest objection urged against curettage. Whether a blunt or sharp curette be employed, mouths of blood-vessels and lymphatics must be exposed, and may become the seat of fresh inoculation by organisms remaining in the uterus. Moreover, the protective layer of leucocytes found in the endometrium beyond the necrotic tissue is in danger of injury, and the spread of infection may thus be aided. Probably such injury seldom occurs, and in the most fatal cases no effective one of this kind exists. On the other hand, recent bacteriological experiments have shown that the old distinction between sapremia and septic infection can no longer be maintained, and that a fatal septicemia may be produced by saprophytic organisms. It is thus of the highest importance to remove infective material

as completely and as early as possible, and clinically excellent immediate results are often found to follow the use of the curette. Ferre maintains also that the majority of cases of puerperal infection treated merely by douching suffer afterward from uterine symptoms, while those treated by curettage recover absolutely.

An accurate estimation of the advantages gained by the use of the curette is difficult, since only hospital statistics are available, and the type of infection in hospitals is acknowledged to be mild. Moreover, a large proportion of cases recover under other methods of treatment, and in the most fatal forms of puerperal infection the curette is too dangerous to be employed. While no general agreement exists as to the type of case suitable for curettage, all authorities agree that the operation is inadvisable in cases of (1) virulent streptococcus infection; (2) general septicemia; (3) peritonitis or inflammation of the appendages; and (4) gonorrheal puerperal endometritis.

The Etiology of Tubal Pregnancy.

W. Hahn (*Münch. med. Woch.*, Feb. 16, 1903) has given the subject of tubal pregnancy considerable study of recent years, and is of the opinion that gonorrhea is its most frequent cause, it being seen most often in large cities, where gonorrhea is so prevalent. Hahn thinks the great increase of tubal pregnancy noted in recent years is due to the wide spread of gonorrhea and in part to the more exact methods of diagnosis and treatment. The condition is not an uncommon one, but is comparatively frequent. The prognosis is not to be regarded as fatal as was formerly believed, as the results of operative and non-operative cases show. The best prophylaxis against tubal pregnancy is the prevention of gonorrheal infection.

Heterotopia in the Histological Structure of a Fibrous Uterine Polypus.

Pollak (*Wiener klin. Woch.*, Jan. 21, 1903) found that hemorrhage in a woman aged twenty-eight, who had been curetted some years previously, was due to a fibrous polypus extruded into the vagina. Examination revealed the presence in the tumor of typical fat cells which formed several lobes of various size with large vessels. To explain the presence of such fat cells in a tumor of the kind, Pollak supposes that when the uterus was curetted its walls must have been perforated and some part of the omentum been drawn through, and becoming adherent, have formed the nucleus of the tumor.

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Case 2.—Mrs. N. F——, aged thirty-two years, married for four years, no children, had suffered every month with dysmenorrhea. Her agony was so intense that it would often cause convulsions. I was called to her during one of these attacks, and after quieting her down with a narcotic, this patient was given Ergoapiol (Smith), four capsules, one four times a day. Four days after she appeared at my office and said that she had passed a very much more easy period than she had for years, having had no pain whatever. The case had almost become chronic, so I ordered her to continue the treatment for the next two months, which she did, with satisfactory results.

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which was four years ago, never having been well since their appearance. I put her on the same treatment, Ergoapiol (Smith), giving one capsule three times a day, and she made a prompt recovery. —Reprint from *Interstate Medical Journal,* July, 1900.

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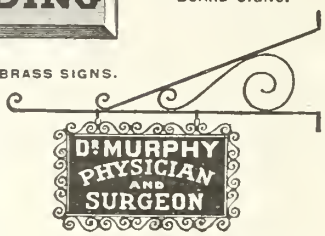

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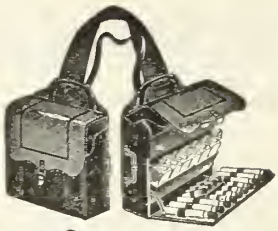

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"In addition to the above this patient received the following in teaspoonful doses every two or three hours for two weeks, when she was discharged:

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THE MEDICAL AGE

VOL. XXI. DETROIT, MAY 10, 1903. NO. 9.

ORIGINAL CONTRIBUTIONS.

PREVENTION OF TUBERCULOSIS IN PRIVATE PRACTICE.

BY J. W. MC LAUGHLIN, M.D., GALVESTON, TEX.

Since the discovery of the bacillus tuberculosis in 1882 by Robert Koch, the possibility that tuberculosis of man may be finally exterminated has become a reasonable hope. Already the death-rate from this disease has been markedly reduced in sections of country and in cities where repressive measures have been faithfully carried out along proper lines. But much remains to be done: the public must be educated, and the coöperation of the people must be had everywhere before complete success can be obtained.

In the war that is now being waged against this, the most common and fatal disease of man, as in all other measures seeking to prolong human life and to lessen human suffering, members of the medical profession have been the initial and principal movers, but they alone cannot carry forward this work to a successful issue; government authority and aid must be had, and doubtless will be forthcoming when the purpose, importance, and value of the work is more generally understood by the public. It is therefore the duty of the medical profession particularly, as its members are informed, to see to it that the people at large are advised of the concealed danger of contracting tuberculosis, to which they are constantly exposed.

The relation existing between the doctor and his patient, and especially between the family physician and his clientele, is of such an intimate, confidential, and responsive character that the doctor in a great number of matters can secure the intelligent coöperation of the people, particularly in matters looking to the betterment of public health, better than can be done by any one else. Now the great mass of the people know nothing of the infectious nature of consumption, but little of the danger of its being trans-

mitted from the sick to the well, and nothing of the means whereby this may be avoided. Here, then, is a fallow field of labor, and the family physician is the best man to do it. He is the family adviser in medical matters, he has the confidence and can command the attention of his patrons, and his opinions in matters of health are respected and usually followed. Besides, he is familiar with the physical diseases, hereditary tendencies, individual predisposition and habits of life of his people. Does not his attitude in the community, his technical education and his professional influence, make it the moral duty of the family physician to become a public instructor in the prophylaxis of tuberculosis? However this may be, there is no doubt that he of all others can more successfully perform the labor.

The following statement of a few accepted facts of tuberculosis, its etiology, prevalence, and mortality, will enable one to more fully and clearly appreciate not only the supreme importance of prophylaxis and its possibilities in the saving of human life and in lessening human suffering, but will also indicate the work of individual prophylaxis that particularly falls upon the family doctor to see to.

The bacillus tuberculosis of Koch is the one essential etiological factor in the production of tuberculosis in man. Inherited predisposition or tendencies, vulnerability of the tissue soil, catarrhal inflammations, simple or infectious, of the respiratory passages, and non-tuberculous adenitis are important contributory causes of tuberculosis, but neither one of these factors nor all combined are capable alone of producing the disease; the germ, the tubercle bacillus, is absolutely essential to the development and growth of tubercle, and it is as impossible for the disease to develop without its germ as it is for an oak tree to spring from the soil without its seed, the acorn.

The Frequency of Tuberculosis in Man.—Taking the mean death-rate of the whole population to be twenty-two per thousand, and the average of deaths from phthisis, or consumption, to be three per thousand, we find that the deaths from phthisis are nearly one-seventh of the entire mortality (Hirsch).

This mortality exceeds the combined deaths from war, famine, plague, cholera, yellow fever, and smallpox. "Estimating the total yearly mortality of the world to be 35,000,000, we find that about 5,000,000 deaths are referable to this cause, being the greatest number reported by reliable observers as due to any single disease" (Evans).

The United States census report for 1890 gives 102,181 deaths

due to consumption. Basing his estimates on the census reports, Vaughn concludes that the total number of persons suffering from tuberculosis in the United States is 1,050,000, or one in every sixty of the population. In New York State more than 13,000 deaths occur annually from pulmonary consumption. In the city of New York more than 8000 deaths, in Paris over 11,000, and in London over 10,000 annually are attributed to this cause.

"Tubercle in its various forms at the present day carries off annually nearly 70,000 persons in England. In the form of phthisis, at ages between fifteen and forty-five—the most useful stages of human existence—it kills one-third of the people who die at these ages, and nearly half between fifteen and forty-five" (Ransom).

According to the official returns for Germany (1893), out of a total of 268,500 persons dying between the ages of fifteen and sixty, of whom the cause of death was reported, 88,654 died from tuberculosis—a mortality of thirty-three per cent for these ages. Leyden estimates the annual death-rate from phthisis in that country to be 170,000, and the total living tuberculous patients to be 1,300,000. Statistics show that of a mortality of 850,000 in France, fully 150,000 deaths are due to tuberculosis (Lartigue).

Distribution of the Bacillus Tuberculosis.—That tubercle bacilli are widely distributed and have been found in the dust, adhering to the walls, floors, and furniture, to the bedding, carpets, and hangings in dwellings, hospitals, prisons, and sanitaria where consumptives have resided need excite but little surprise, when one considers the great number of persons suffering from chronic ulcerative phthisis who, either from ignorance or indifference, daily and nightly expectorate from their lungs germ-laden sputum containing millions of virulent bacilli. Nuttall estimates that the twenty-four-hours' sputum of a consumptive patient may contain from 3,000,000 to 4,000,000 bacilli. Futhermore, it has been established that sputum containing bacilli expectorated, dried and divided into a fine dust, may retain its virulence for several weeks. The best known experiments with dust and infectious tubercle bacilli are those carried out under the direction of Koch by Cornet. Dust gathered from various places, as hospital wards, asylums, sanitaria, prisons, and private dwellings, where tuberculous people had lived, perhaps died, was injected into guinea-pigs and proved infectious in a large proportion of the cases.

We may learn from this that the tubercle bacilli contained in the sputum of tuberculous patients may retain their virulence for weeks, possibly months, after it has been dried, divided into a fine

powder, and scattered to the winds. In the light of this evidence the astonishment that is excited by reading the frightful array of mortality statistics of tuberculosis is changed into wonder that any one breathing air polluted by teeming millions of virulent tubercle bacilli should escape infection. In fact, recent observations indicate that a very much larger percentage of the population are attacked than has heretofore been known. "The statement has been made by Bouchard that of the post-mortems of the Paris morgue—generally upon persons dying suddenly—the percentage found with some evidence of tuberculous lesion, active or obsolete, is as high as seventy-five. Large as these figures appear, they are probably very incorrect if, as has been done in Ribbert's laboratory, a systematic inspection is made for the purpose, tuberculous lesions are found in practically one hundred per cent of adult bodies" (Isler).

Fortunately for the perpetuation of the human race, all persons are not equally susceptible to infection with the tubercle bacillus. There is a difference in what may be called the tissue soil of the body to infection. When the fertility of the tissue soil is plus, the invading tubercle bacilli develop rapidly and grow luxuriantly. On the other hand, when the fertility of the tissue soil is minus, the invading tubercle bacilli do not develop, or they grow slowly, and the lesions produced are strictly localized. Now, while the condition of the tissues of the body, which have been spoken of as tissue soil, but is generally designated as vital tissue resistance, is, I believe, inherent and determines natural susceptibility and immunity in contradistinction to acquired or artificial susceptibility and immunity, it should not be forgotten that the condition is relative and not absolute, and that it may be greatly influenced by environment. For example, bad environmental conditions weaken vital resistance and thereby favor infection, while favorable conditions of environment strengthen the vital resistance, and in equal degree retard, check, or suppress infection. This is an important fact that should never be lost sight of in the treatment of phthisis.

Individual Prophylaxis.—To stop the spread of tuberculosis by the careless or ignorant consumptive, we must begin by convincing him of the wrong he is doing to himself and to others by the manner in which he disposes of his infectious expectoration. Such a patient should never expectorate except into a proper receptacle. He should never expectorate into a handkerchief, since the dried sputum in the handkerchief becomes disseminated when it is unfolded; besides, there is danger of the patient reinfecting

himself at this time by drawing into the lungs infectious material during the deep inspiration that precedes the coughing spell.

In all places where consumptives who are able to be about are likely to be, there should be placed at suitable distances a sufficient number of properly constructed spitboxes. They should be easily accessible, placed at a convenient height, supplied with lids that will screen contents from flies, and so constructed that they can be easily and safely cleaned.

A suitable spitbox for use at home is made by Seabury & Johnson. It is constructed of impermeable pasteboard, with turned-in top edges, and fits into a metallic frame with handle and cover. When the cup is filled, the pasteboard is taken out and burned, with its contents. There is also a sanitary sputum cup manufactured by the Kny-Scherer Company of heavy compressed paper, with handle and a close-fitting cover. Its cheapness and easy destruction by fire—cup and contents together—make this a very useful cup. Among other forms of spitboxes are those to be carried about by the patient, in his pocket, and should always be used by him when the stationary cuspidors are not at hand. A patient should always have two pocket cuspidors, so that he may never be without while one is being cleaned. The most thorough method of cleaning any cuspidor filled with tuberculous sputum is to place the spittoon and contents in boiling water, to remain there for five or ten minutes; thorough mixing of the contents with five-per-cent, or better ten-per-cent, carbolic acid; or 1:1000 acid sublimate solution can be safely relied upon to disinfect.

When consumptive patients cannot be persuaded to use the sputum pocket flask, squares of paraffined paper should be provided, each square to receive the sputum of one coughing spell. The ends of the paper should then be brought together, twisted, and the little packets carried in a bag or reticule until an opportunity to burn them is offered.

The status of a consumptive, especially one able to be about, should be clearly defined in the community. A consumptive becomes a menace to the public health only through the practice, filthy and unnecessary, of expectorating promiscuously. There is practically no danger to be feared except through this habit. Control the habit and you destroy the danger. If the habit cannot be controlled by reason, then it should be done by law. No man has the right to needlessly expose others to danger, and no community, through mock sentimentality, should hesitate to enforce necessary sanitary measures in such cases.

THE CRIMINAL INSANE.

BY G. H. MOODY, M.D., SAN ANTONIO, TEXAS,
First Assistant Superintendent, Southwestern Insane Asylum.

There are confined within our Texas asylums to-day about three thousand patients. Through the wise foresight of its individual members, and guided by the counsel of the best medical thought of our great State, our two recent State legislatures have provided for an institution for the maintenance and treatment of our epileptics separately. This institution, when completed, will stand throughout endless time as a fitting monument to the memory of those who voted its existence, as well as to those who are supervising its construction—not so much on account of its adaptation in design and construction to the purposes for which it is intended, which within themselves command much commendation, but rather more on account of its imperative need in order that the epileptics, the majority of whom are so disagreeable that they cannot be kept with other patients except with great difficulty and detriment to all, may be isolated and more satisfactorily treated.

Of the whole number of the insane population there are at least eight per cent, or about 250, who are known as the criminal insane. This term is not meant to signify any one clear-cut classified form of insanity, but it is merely an underlying tendency which in some insane individuals is ever present, which may exist in any one of the various forms of insanity, and which is ever ready to manifest itself whenever the circumstances and environments conduce to its precipitation. It is probably enough to say that, associated with whatever form of insanity in which it may be found, it is a morbid tendency which ever exists in some individuals, which is due to brain disease or defect, and which renders the patient constantly dangerous, or constantly liable to become dangerous, to public safety.

This class should be eliminated from our present asylums and placed in an institution especially constructed and equipped in accordance with the necessities of their demands. This institution should be known as the State hospital for criminal insane, and should be as centrally and healthfully located as possible, upon fertile land, and should be built upon the latest approved plans with reference to hygienic conditions, and so constructed and equipped that facilities for occupation may be had for all, and that the possibilities of escape may be reduced to a minimum. It should be the purpose of this hospital to care for all insane per-

sons, convicted or unconvicted, who are charged with crime, whether the disease of insanity is known to exist at the time of arraignment or trial, or subsequently develops while undergoing sentence. And from the time of the completion of this hospital our laws should be so amended as to provide that commitment by the courts should be made directly to this institution in all cases where the plea of insanity prevails as a defense for criminal acts, and that all the insane now confined in our asylums in whom can be discovered criminal tendencies should be immediately transferred to this institution, as well as all those who might develop insanity in our State reformatory and penitentiaries. And it should also provide that the management be required to retain indefinitely this latter class, even after the expiration of their sentence, or until they shall have fully recovered.

All individuals meeting any one of the above conditions should be promptly committed to this institution for treatment, and kept there securely until they shall have become restored to health beyond all question and capable of normal moral citizenship, or until they shall have become harmless dements, when they should be transferred to one of the present asylums.

The two fundamental reasons for the existence of insane asylums are the welfare of the insane and the protection of the public. In support of the necessity of these changes whereby this class of the insane may be thus isolated and the efficacy of all our asylums improved thereby, there are many good reasons to be offered.

In addition to what drugs we may be able to give them with benefit, and other adjuvant therapeutic measures, such as electricity, massage, scientific bathing, etc., which we may be able to apply when proper equipments will permit,- there is one other measure which is constantly receiving increasing attention, and which is sure to yield favorable results in proportion to the extent to which it can be applied, and that is occupation, which implies exercise, and which should be had in the sunshine and fresh air as much as is practicable. Through its favorable influences on sleep and appetite especially it conduces to improved physical health, one of the first advance steps desired in the hope for mental improvement. There is nothing more universally and wholesomely accepted by them than occupation. They constantly beg for it, and esteem it a great favor when provided for them. It diversifies their daily delusions, illusions, hallucinations, suspicions, sorrowful remembrances, and various eccentricities of thought, and helps them to forget temporarily their loss of liberty.

As it is, we not only cannot take the great bulk of harmless

patients out as much as is desirable, but are often forced to place some of the worst criminals in solitary confinement, which is not only detrimental to their treatment, but is most horrifying punishment to them, notwithstanding the lack of such intention, but which often becomes unavoidable by reason of the urgent necessity for the protection of all and the safe keeping of such patients, thus militating against the application of one of the best therapeutic measures for the treatment of all classes.

Aside from its decided commendable therapeutic feature, there is an economical circumstance worthy of much consideration in connection with this question of occupation. The few criminals in solitary confinement, and the other criminal class, all of whom do nothing for their support by reason of their danger to each other and to the public, can be taken out and given occupation, and could be protected from the constant dangers of doing violence by reason of better equipments and especially qualified help; and the results of their labor could become in a measure remunerative, thereby relieving approximately the already overburdened taxpayers of a class of delinquents who are amply able in every particular to maintain their own support.

Then, with this class eliminated from our asylums, the inmates could be taken out in great numbers and with small help, and various kinds of labor provided for them aside from farming, such as could be done in various workshops, with which every institution should be provided, where much of the material needed for running the institution could be made.

Thus it is plain that by isolating this criminal class measures now wholly impossible can be put in successful operation, which will conduce greatly to economy, as well as to the increased comfort of all and to the final restoration of many.

Then there is a humane consideration which probably merits more attention than any other point yet mentioned: to have a few criminals mixed up in the same wards and in the same rooms with the great bulk of our insane population is not right. Most all of these patients come from the moral element of our country, and they are men and women, young and old, who are innocent, submissive, and law-abiding, and are by nature, training, and mental construction as sensitive to indecencies and immoralities as are sane individuals. These better elements in them should be nurtured and developed rather than ignored. They constantly write letters home asking what crime it is they have committed that they must be locked up with such people, and constantly make personal pleas begging protection from the violence of certain patients who have previously assaulted them: "Because I was

born unfortunate and diseased I have to be kept locked up with some of the most indecent and dangerous scoundrels on earth." "Just because I am unfortunately nervous I have to stay here constantly, even in the same wards and same rooms, with women with whom my people outside would not be caught for one moment."

Expressions like these are heard almost daily. This state of things should not be. It develops still more the perverted tendencies in the young. It makes the viciously inclined, both young and old, more vicious. It increases and confirms in many the already existing opinion of injustice being done them, and justly makes them revengeful and rebellious. It increases still more the depressed feelings resulting from imaginary depravities.

Now comes the consideration of the all-important question—public safety. Through a wise provision of our laws we are forced to pay taxes to be utilized for the protection of all against would-be offenders. Then in return we should have assurance that we will receive protection. Under the present system we all know that our asylums do not give us absolute protection, nor can they be made to do so more effectually without unnecessarily inflicting untold injustice upon the great majority of the unfortunates.

Animated by an innate beneficent spirit ever present in man, and enlightened by modern conceptions of the true nature of insanity, our alienists and asylum physicians all over the country are wisely advocating non-restraint of the insane, and the elimination, as nearly as possible, of all likeness of asylums to prisons. To this end iron bars to windows and heavily barred doors have all been abandoned, and wire grating and light wire doors substituted; and when sufficient help is at command doors to the sleeping-rooms are entirely abandoned—all with the laudable hope to dispel the constant reminder of prison life. No one advance step is more commendable, and it can be and is being carried out successfully in those States where the criminal insane are isolated in criminal asylums. But in our State, where the criminal insane are constantly mixed up with all others, the effort must either meet with constant defeat or the public must continue to suffer the occasional shock of violence and outrage from some escaped criminal lunatic. With this class no such attempt at the non-restraint treatment should be made. Their increased affliction does not make them less dangerous, but often more so, and our increased sympathy for them should not induce us to give them opportunities to escape, whereby they may impose their depraved propensities and destructive tendencies upon an innocent public. They

should be put behind iron bars and kept there securely except when constantly attended.

By making their safe keeping more certain it will protect the public against them, and will also make those yet at liberty fear more the consequences of their criminal acts. It will also lessen the constant multiplication of their kind until public sentiment becomes molded in favor of more stringent methods for prohibiting their propagation.

Many, even outside of the asylums, know of the ease with which patients may escape, and of other means through which they may gain their freedom. One of these possibilities I have often heard them mention, and criminals sometimes rely upon it when seeking to evade their punishment for crime by the plea of insanity.

I refer to the inexcusable and barbarous practice of which many of the old States have long since freed themselves, but to which our State is still clinging, though, I am glad to say, with much less tenacity than formerly—the practice of changing the superintendents of these institutions with every new administration, for political reasons. At the time of these changes this class of patients rely upon opportunities for deceiving the new officials into the belief that they are either restored, or greatly improved, whereby they may gain privileges through which they may easily escape.

Dr. Charles H. Hughes, of St. Louis, in the April number of the *Alienist and Neurologist,* of which he is the distinguished editor, makes the following remarks upon this point: "The insane had better not have the benefit of the insanity plea unless they are detained long enough after acquittal to assure the safety of the community from the consequences of a possible recurrence of their malady. The law should provide for a five-years' detention in case of actual acquittal on ground of insanity."

This is an excellent suggestion and should be made a law in our State. Mental storms which we cannot detect, because there still exists sufficient intellect and self-control to obscure their symptoms, probably often occur in some individuals. For this reason insane criminals go at large for years unapprehended. They may temporarily lose self-control and commit one criminal act, and then live for years, doing well the ordinary duties of life, while still in full possession of the same criminal potentialities, ever ready to become active in case the one necessary occasion or circumstance presents.

Insanity is variously defined. Hack Tuke thus defines it: "A disease of the brain (idiopathic or sympathetic) affecting the

integrity of the mind, whether marked by intellectual or emotional disorder."

Frederick Peterson says: "Insanity is a manifestation in language or conduct of disease or defect of the brain."

To decide just where sanity ceases and insanity begins is in some cases most difficult. Who is able to determine correctly in all cases the amount of sanity or insanity present and the degree of responsibility to which some such criminals should be held for their acts? Indeed, are we wholly justified in saying that any individual has not a faulty judgment who will so lightly consider the deplorable consequences of his criminal acts? It is not impossible that they "cannot contemplate things in the bright light of calm understanding, but view them in colors of distempered feelings."

W. Douglas Morrison, of the Wandworth prison in England, says: "The criminal is the product of anomalous biological conditions as well as adverse circumstances." Still, even with these facts before us, we cannot subject a more normal public to the depredations of those less normal.

Of the whole population of our country, those of us who have our liberty and are supposed to be sane, a very small minority can be said to have perfect minds. All minds not perfect are necessarily imperfect, or, in other words, defective. It consequently follows that the great majority of us have defective minds. Then must this great majority be excused from legal responsibility? If so, there will be but few legally responsible. If not, then we have to admit that some defectives are responsible. Admitting this necessarily admits of gradations of legal responsibility. This admitted, it is plain that we should not have inflexible laws making arbitrary punishment for the same offense against all offenders alike. If one defective must hang for his crime, then is it not wrong to confine securely and indefinitely another criminal who is more defective, and to isolate him from the present asylum with all its impossibilities for escape, and to enjoy all the associations, special privileges, and gentle nursing which our present asylums are so earnestly trying to bestow upon its unfortunates and diseased?

The object of any form of punishment provided for by law is deterrent and not revengeful in contemplation. The conclusion of the greatest minds and the accumulated experiences of centuries accord to punishment of criminal acts the most effective check possible to be placed upon crime. Fear of punishment and hope of reward modify the acts of all sane individuals, and the great majority of insane ones as well. The object and hope of all

asylum management is the exclusion of all vestige of punishment, but the very nature of the situation, the fact of the asylum and the disordered mental state requiring restraint, is within itself punishment to the patient. Moving a patient from a nice quiet ward to a violent one with closer confinement and fewer privileges is punishment, as well as is administering apomorphine, even though it is done entirely through necessity, in order that violence to others may be prevented and any degree of order maintained, and not at all with the object or desire of punishment. And in almost every instance it has a marked deterrent effect upon their conduct, and in many cases of the most dangerously insane it positively stops all attacks of violent outbreaks and wrong conduct.

These facts prove conclusively that those possessed of the criminal and rebellious tendency, even with universally admitted mental aberration, can be held in check through fear of the results of their wrong-doings. So if by isolation it should appear that there is discrimination against one class of the mentally diseased merely because its course in them takes a criminal tendency, and should create the appearance of some degree of punishment, it will be only fortunate in that it will surely induce some to hold in check their criminal tendencies.

Then let us adjust our laws and our institutions to the greatest needs of the greatest number by confining constantly and securely our defective criminals, though some of them be greatly defective and diseased, thereby protecting society against constant dangers of irreparable impositions, and posterity against endless varieties of multiplied pollutions and defects.

THE CANINE RED CROSS CORPS.

BY W. TH. PARKER, M.D.,

Formerly Acting Assistant Surgeon U. S. Army.

Poetry has sung the praises of the dog, history has recorded his virtues, and painting and sculpture have offered beautiful illustrations of "man's true friend," as our four-footed companion, the dog, has been aptly named.

The devotion to duty of the dogs owned by the famous monks of St. Bernard is of world-wide reputation, and one of the most popular breeds of canines is named after the holy monk.

But in the year of grace 1903 a new idea is in successful operation: it is the army red cross dog, trained for deeds of mercy,

requiring intelligence, devotion to duty, fearlessness, judgment, and affection.

The red cross dogs of war are unique and worthy of unqualified admiration. These members of the canine red cross corps are four-footed angels of mercy, and not only can they be the means of relieving suffering, but actually of saving life. There exists in Germany a society called the "German Society for Sanitary Dogs," for the purpose of supplying trained dogs to accompany the army into the field. This red cross humane society (or as it is officially known, the "Deutscher Verein für Sanitätshunde") is under the patronage of the Grand Duke of Baden, but its membership is made up of empresses, queens, princesses, grand dukes, and nobility without end, and citizens of national honor and standing. It is needless to add that the medical profession is ably and honorably represented on the list of members.

All this interest is centered upon rearing intelligent dogs, mostly collies, to rescue and relieve, and to search out in deep wood and swamp, the wounded and the dying soldiers. These noble animals are trained carefully in their life-saving work, and as soon as considered proficient are presented to the government as an offering free of charge.

The insignia of the society is in enamel, a white field with a red cross, a gold band in circle surrounding the cross, with Deutschen Verein für Sanitätshunde Sitz Köln. Upon the red cross is a dog's head in silver.

The mission is one worthy of imitation among all nations, and in the United States service it would prove of great value. The topography of our country is such that these red cross dogs could prove most useful in war and in warlike evolutions. Nor need the army have the monopoly of this useful innovation. Marines are frequently landed upon lonely coasts where foliage is dense. It would be a good idea to have some of these dogs on every vessel of the navy; they would be the pets of the crew, and would through the natural affection of the dog seek diligently on shore for those wearing the uniform of sailor or marine.

Indifferent to storm and tempest, shot and shell, the red cross dog goes directly upon his errand of mercy. He patiently bears his pack with the bright red cross on either side. These beautiful dogs are trained to carry a saddle with red cross badges to designate them. The packages contain bandages with first-aid-to-the-injured instructions for using the triangular roller bandage and styptic cotton, and the flask at the dog's collar is filled with restoratives easily obtained. It would require very little effort to introduce into our service this humane and commendable idea.

The expense is not great, and if patriotic citizens would contribute such a charity to the nation as a gift we should emulate the Germans, who originated the idea and have developed it with such brilliant success. It is one of the most popular public movements of patriotic intent in existence to-day.

The mission of the red cross dog is to eradicate so far as possible the awful word "missing" from army records. In actual war, or even in ordinary maneuvers, the marching of armies extends over every conceivable formation of land; troops penetrate swamps and densely wooded hollows and hillsides. A wounded soldier, or one prostrated by hunger or disease or injury, may be forced to halt and become separated from the command—lost and practically abandoned. At the next roll call he is reported "missing." This is the man the intelligent red cross canine is taught to find, and having found to caress and awaken and offer his bottle of restoratives. These bottles are suspended from the dog's collar. From a packet marked with a red cross, and which is placed as a saddle on the faithful animal, the wounded or injured soldier can procure styptics to arrest bleeding, controlling rubber bandages to control arterial bleeding, or ordinary triangular or roll bandages to support and protect an injured limb. Upon a book or paper he can write a description of the location where he may be found, and give a short description of his sickness, injuries, or wounds which prevent his rejoining the column without suitable assistance. By a unique system all this information can be recorded with the least possible exertion, even when the soldier is severely stricken.

When the dog rejoins the command the message is found and suitably recorded, and instant relief despatched for the rescue. In some cases where the soldier although sick and wounded has merely lost his way, the dog acts as a guide to safety.

Thus the dog has been made use of to second the efforts of the medical corps in a mission deserving of our best and most earnest consideration.

A BILL has been introduced into the Pennsylvania Legislature which makes it unlawful for any person or persons to promote or manage or participate in any athletic contest or exhibition held within the State of Pennsylvania which shall continue for more than twelve hours in each calendar day. The penalty imposed for violations of the act is a fine of not less than $100 or more than $1000, or imprisonment not exceeding two years, or both.—*American Medicine.*

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE ETIOLOGY OF SLEEPING SICKNESS.

The peculiar disease known as sleeping sickness, which has so long been a cause of scientific interest on the north coast of Africa, has recently been made the subject of an investigation by a commission on the part of the British government. The location of the disease seems to be restricted to the district between Senegambia on the north and the Portuguese territory to the south of the Congo. The endemic area is therefore a large one. The disease begins in those affected very insidiously. The patient becomes listless and morose, has a melancholy aspect, and a certain puffiness about the face. After a variable period of weeks or months there is a desire to fall asleep at unusual times. This lethargy tends to increase; the patient becomes more silent and more taciturn. As the disease advances he never spontaneously enters into conversation or asks for food, and as the torpor progresses he forgets to chew his food. When he can be made to eat the food is digested and assimilated. As time goes on he becomes wasted, and tremor occurs in the hands and tongue. This condition continues until the inevitable fatal ending, which may occur at any time from four months to as many years.

The report of Dr. Aldo Castellani, a member of the commission sent to investigate the disease, which is published in a recent issue of the *British Medical Journal,* refers to the work of previous investigators, some of whom thought they had isolated a special bacillus causing the malady. He believes these to have been mistaken in the findings; he thinks that he himself has discovered the infecting organism. He claims to have grown it with absolute certainty, and always in pure culture, from the cerebrospinal fluid and blood of the heart taken with aseptic precautions. He has grown this germ from ten necroscopies. In life he found it

only once in the blood, but he has grown it in two cases out of three from the cerebrospinal fluid removed by lumbar puncture.

The germ may be considered as a distinct variety of the streptococcus group. The microscopic appearance is very variable, depending on the different media on which the germ has been cultivated and on the different times of growth, etc., all transitions from long chains to typical diplococci being seen. The form and size of individuals are also under certain limits variable.

Frequently about the chains and the diplococci forms well defined mucoid capsules are seen, and in hanging-drop preparations the short chains and diplococci forms show a well marked Brownian movement. In old cultures involution forms are produced; frequently single members present large dimensions, and sometimes they present the form of a club.

Castellani from his experiments has concluded that the organism as stated by himself must be regarded as a new variety of streptococcus. In support of his claim he says: "The cultivation on gelatin is sufficient to differentiate it from the streptococcus lanceolatus, as the latter does not grow at all or very badly on that medium. From the streptococcus pyogenes it is differentiated by its much more vigorous growth on all media, and especially on agar, by the tendency of the colonies to coalesce, and by the non-coagulation of milk." As regards the diplo-streptococcus of the Portuguese, Castellani does not think any confusion can arise. The Portuguese state that the culture of their germ generally failed on the usual media like gelatin agar, etc., and with gelatin they never succeeded in obtaining cultures. The streptococcus described by Castellani grows very well on gelatin and on all other media. This character differentiates the organism also from the streptococcus intracellularis (diplococcus intracellularis of Weichselbaum), which does not grow at all or very badly on gelatin, and also according to some authors in serum.

The conclusions of Castellani are interesting, and seem to strike at the foundations of the etiology of this strange disease.

EDITORIAL NOTES.

The Presence of Tetanus in Commercial Gelatin.

Gelatin injections have of recent years been used greatly in Europe and in this country as a means of treatment for aneurism and as a direct and prophylatic hemostatic. That their use is not entirely devoid of danger is shown conclusively by J. T. Ander-

son, assistant surgeon U. S. Public Health and Marine Hospital Service, in a report on this subject published in Hygienic Laboratory Bulletin No. 9. A number of samples of commercial gelatin were examined by Dr. Anderson, and one showed tetanus spores. Two samples showed an oval-ending spore rod, whose identity was not proved, but in stained specimens it was hard to distinguish it from tetanus. The thermal point of death of the organism was found to be between twenty and thirty seconds at 100° C. The presence of the spores of tetanus in gelatin makes it important that when used for injection it should be thoroughly boiled for at least ten minutes.

Whether or not the boiling would destroy the efficacy of gelatin as a hemostatic is yet to be determined. However, it is better that some of its therapeutic value be lost than to subject any one to the danger of tetanus.

The Founder of the Salicylic Treatment.

The death of Dr. McLagan, the founder of the salicylic treatment of rheumatism, recalls much past history. That this treatment has enjoyed an unusual share of popularity cannot be gainsaid. How is it to be in the future? The pathological conception underlying the salicylic treatment is undoubtedly changing. Rheumatism will soon be considered distinctly microbic in its toxins rather than purely chemical. Probably the originator of this treatment, had he lived much longer, would have had to change his convictions on many points. However, McLagan's name will live in medicine as the founder of a line of treatment which, however empiric it may be, will not be the less valuable when all the conditions of the problem are revealed.

The Use of Boracic Acid as a Preservative.

The use of boracic acid as a food preservative has had many stanch defenders in the controversy as to whether it is harmless or otherwise. Dr. Merkel, a German physician, has recently made public the results of his experiments on the internal administration of boracic acid. He gave from 15 to 30 grains in solution from two to eight days at a time, with the result that symptoms of gastrointestinal irritation, such as flatulence, eructations, colic, epigastric pains, and diarrhea, developed. He found that invalids were especially susceptible. From the work done by this experimenter it would seem that boracic acid is not the harmless preservative that so many have claimed it to be.

Warning the Poor Against Pulmonary Cures.

A very wise plan has been adopted by the New York Tuberculosis Committee of the Charity Organization Society, in having printed and distributed among the poor of that city circulars warning against the patronizing of concerns which profess to cure consumption. Of all the brazen medical advertisements that constantly appear in the daily press of this country, this form of advertisement is the most offensive. To take money from poor people who are victims of tuberculosis is on a par with highway robbery, if not worse. The medical societies of the country could do valuable missionary work if they adopted this or some similar plan.

Some Profundities in Medical Research.

The two most important medical discoveries of the month, as recorded by the lay press, are that strawberries are the real cause of suicide, and that corsets are the exciting cause of appendicitis. Some fellow finds the preponderance of suicide is in the strawberry season, and so reasons *post hoc propter hoc*. The death of several society leaders from appendicitis leads to the other conclusion. As examples of medical research, they are not less striking than as specimens of logic.

The Religious Press and Medical Advertisements.

It is noted with pleasure that at least one set of religious journals will in the future bar medical advertisements from their columns. The nine official journals of the Methodist church, which are all conducted under one management, have recently made the announcement that no more medical advertisements will be accepted. It is to be hoped that other religious journals will follow the good example set by the Methodists.

The Profession of Law More Attractive than Medicine.

Of the 5617 graduates of various gymnasia of Germany who graduated in 1902, only 525, or 9.35 per cent, chose to take up a medical course. On the other hand 1310, or 23.3 per cent, entered the different law schools of the country. It would seem that the public is beginning to realize that medicine does not offer so attractive a career as was formerly believed.

ITEMS AND NOTES.

Saxony has 945 charlatans to 1957 regular physicians.

Rabies is still prevalent in a mild form in some parts of Chicago.

The next meeting of medical librarians will be held in New York May 16.

The Seventh National Congress of Otology will be held at Bordeaux August 1 to 4.

Dr. David, of Montpellier, France, celebrated his 102d birthday February 10. He retired from practice at 98.

The Paris Faculté de Médecine has lost two prominent men during the last month, Professors Panas and Varnier.

The German Society of Physicians and Naturalists will hold its seventy-fifth congress at Cassel, September 20 to 26, 1903.

The city of Mazatlan, Mexico, has had no new cases of plague for some time, and business has resumed its usual aspect.

The honorary degree of Doctor of Science is to be conferred by the University of London upon Lord Lister on June 24 next.

A society for the culture of musical therapeutics has recently been inaugurated in New York City under the patronage of Dr. E. Guernsey.

Dr. William H. Howell, dean of the Johns Hopkins Medical School, has been elected a member of the American Philosophical Society.

The second general congress of the "Krankenkassen" of Germany, at Berlin, March 15, was attended by 1128 delegates, representing 5,300,000 policy holders.

The United States Public Health and Marine Hospital Service has established a hospital at Cape Nome, Alaska, and the hospital at Dutch Harbor will be discontinued.

The sixth annual Congress of American Physicians and Surgeons will be held in Washington, D. C., May 12 to 14, under the presidency of Dr. W. W. Keen, of Philadelphia.

Dr. Friedreich Mueller, former assistant to Dr. Lorenz, has returned to Chicago, and announces that he will locate permanently here and practice his specialty of orthopedic surgery.—*Journal of the American Medical Association.*

A new polyclinic for the treatment of children's diseases was opened last month in one of the poor quarters of Paris. The establishment has been built by Dr. H. de Rothschild, one of the members of the millionaire family of that name.

The Samuel D. Gross prize of $1200 will be awarded January 1, 1904. This prize is awarded every five years to the writer of the best original essay on surgical pathology or surgical practice founded upon original investigation. Candidates must be American citizens.

One of the healthiest spots in the world is the Island of Pico, in the Azores. It has a population of about 3000. For 395 years it has not had a physician or a drug store, or a contagious disease. When residents become so old that they think it is time to die, they move to a less healthy place.—*Exchange.*

The fifth meeting of the International Congress of Dermatology will be held in Berlin, September 13 to 17, 1904. The following questions are proposed for discussion: (1) Syphilitic diseases of the circulatory apparatus; (2) skin affections in anomalies of metabolism; (3) epitheliomata and their treatment.

In the parish of Acadia, Louisiana, some 225 head of cattle have died recently from charbon. The farmers, ignorant of the infectious nature of the disease, skinned some of the dead animals and sold their skins. As a result thirteen human beings contracted charbon. The police jury of Acadia has been called together to take steps to stamp out the disease.—*Exchange.*

The following statistics have been issued by the Imperial Health Board of Berlin, in regard to the mortality from pulmonary tuberculosis in Europe: Russia has more than 4000 deaths per million; Austria-Hungary and France, more than 3000 per million; Sweden, Germany, Switzerland, more than 2000 per million; Netherlands, Italy, Belgium, Norway, England, more than 1000 deaths per million.

The bill which during the early part of the winter was introduced in the Pennsylvania legislature to legalize the practice of osteopathy and to provide a board of examiners for this so-called school of medicine has, according to *American Medicine,* been

defeated. There were twenty-four physicians and two druggists among the members of the House, and it is said that they contributed effectually to the defeat of the measure.

It is said that a proposition has been submitted by a representative of Chicago University to found an association of endowed university medical schools, somewhat on the plan suggested by Dr. Barker some time ago. A meeting has been called in Washington next month, but only about half a dozen of the leading schools have been invited. It is understood that Johns Hopkins University objects to this narrow limit.—*Journal of the American Medical Association.*

The ringing of the many church bells of Manila, at all hours of the day and night, with the many "fiesta" days, which seem to be largely celebrated by bell-ringing, has caused the passing of an act by the Commission for the abatement of loud and unusual noises. Hereafter the jangling of bells at unseemly hours in Manila, which has been a source of great annoyance to the nervous and those desiring to sleep, will be stopped. The bell-ringing for the early mass, which is celebrated before daylight, has been a special cause of complaint from foreigners.—*Medical Record.*

Dr. Marcel Baudouin, of Paris, has been made a member of the committee on admissions to the St. Louis Exposition, and expects to remain in this country several months. He is the founder of the unique Institut de Bibliographie, also the editor of the *Gazette Médicale de Paris* and the *Bibliographia Medica.* He is the moving spirit in the Agence de la Presse Scientifique Internationale, and has published several important works, alone or in collaboration with others. He visited this country at the time of the Columbian Exposition.—*Journal of the American Medical Association.*

Owing to the number of cases of hydrophobia which have occurred in New York within the past few years, it is proposed that a new system, or a more efficient manner of carrying out the present law, shall be initiated in the city. The duty of keeping the streets free from stray dogs lies with the Society for the Prevention of Cruelty to Animals, and it is asserted, says the *Medical Record,* that the society is lax in fulfilling this function. There is no motive to look after ownerless dogs, as no fine can be inflicted, and the society, in the case of the owner of a stray dog without a license caught by its agents being fined, receives a portion of the fine. All stray dogs should be carefully looked after, as such animals are the chief means of spreading rabies.

A Paris exchange brings statistics collected among 1000 women in the insane asylums, and the same number in the general hospitals. An excessive growth of hair on the upper lip was noted in 497 insane women out of the 1000, while only 290 were found in the 1000 in the general hospitals. It was noticed that the latter very frequently had a personal or family record of neuropathy or mental degeneration. Among the insane women the proportions were 54 per cent of the cases of senile dementia; 56.6 per cent of those with general paralysis; 42.1 per cent of those with dementia præcox; 38.8 per cent of the idiots and imbeciles; 37 per cent of the epileptics; and 47.8 per cent of those with various other mental affections.—*Journal of the American Medical Association.*

Dr. Paul Garnault, the Paris physician who in June, 1901, offered himself for experimentation in order to refute Koch's assertion that tuberculosis cannot be transmitted from cattle to man, is now in New York, says the *Journal of the American Medical Association.* His object in coming here is to deliver a series of lectures on the evolution of Roman Catholicism. Speaking of the inoculation experiments made on him by three other physicians, and at the same time, as a control, on guinea-pigs, he stated that in twenty-five days the guinea-pigs developed tuberculosis, and died within two months, and that when examined in July by Dr. Roux, that savant declared a local tuberculosis had been set up in Dr. Garnault. That the process did not become general is attributed to his vigorous health.

In a comparative table of stature, arranged according to nationalities, the United States Indian, says *American Medicine,* stands higher than any other race of the world, though the Patagonian runs him very close. The white citizen comes next. The United States negro ranks fourteenth in the scale, and of all the countries in the world considered the Portuguese are found to be the shortest. It has always been proverbial among anatomists that blond nations are greater than their darker neighbors. This is due to the geologic positions of the blond races. They are characteristic of the north, and on account of the lower degree of temperature are induced to take more exercise, which throws them more in the open air. At the top of the list of countries, arranged in order of stature, the first seven, after the United States white men, are Norway, Scotland, British America, Sweden, Ireland, Denmark, and Holland, all northern nations.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Recovery After Operative Treatment of Spinal Paralysis.

At a recent meeting of the Berlin Medical Society J. Isreal (*Medical Press,* April 8, 1903) read a paper with this title. From the literature of the subject he had collected thirty-four cases in which operations had been performed for tumors of the cord, and brought forward a case of his own. The case was peculiar in that the tumor sprang from the vertebra itself. It was that of a woman of thirty-nine who had borne nine healthy children, and had never previously suffered from any ailment. For a year and a half she had continuous pain in the upper part of the abdomen, with temporary exacerbations. It then spread upward. After a year and a quarter there came on a weakness of the right leg, which soon passed to the left. There was paresthesia of both legs. After three months this became paraplegic, with complete cessation of all sensation, exaggerated patellar reflexes, and ankle-clonus. The bladder was not paralyzed, the muscles of the legs not atrophied, the vertebræ not tender nor changed, but the patient could not raise herself up nor sit down. The right kidney was enlarged, but the urine contained nothing abnormal. The spinal column might be affected, but there was a question whether the changes were intramedullary or not. With the symptoms shown the first was not probable. Everything pointed to external compression. Syphilis, tuberculosis, and spondylitis could be excluded, so that tumor only remained. The question now arose as to whether the tumor was primary or a metastasis, or whether the enlargement of the kidney was connected with it. This could not be determined clinically, so an exploration was made, when it was found that the kidney was prolapsed and enlarged, but nothing more.

The disease affected the seventh dorsal segment. The speaker therefore removed the vertebral arches of the sixth and seventh vertebræ, and found a tumor springing from the right half of the sixth arch, which pushed aside and covered the cord. The tumor was very brittle, and could only be partially removed from the bone by the sharp spoon. At this part of the operation a hissing sound was heard, showing that the tumor had grown through

the bone into the pleura. Immediately after the removal of the growth the spinal cord regained its normal position.

The further course was favorable. After some weeks sensibility returned, from below upward, the paralysis retrogressed, and now after eight months the patient has improved so far that she can walk, but not securely. The power is rather less in the right than in the left leg, muscular sense normal, sense of heat rather diminished, the patellar reflexes are still somewhat exaggerated, no more ankle clonus.

The tumor was a chondrosarcoma, and as radical removal was impossible the prognosis is unfavorable. Even Roentgen illumination shows a shadow of the diseased vertebra, which might be indicative of recurrence.

A Preliminary Report on Some Experiments with the McGraw Elastic Ligature.

At a recent meeting of the New York Academy of Medicine, M. S. Kakels (*Medical Record,* April 4, 1903) presented a paper with this title. He exhibited one of these ligatures which he had recovered, and commented upon its insignificant size as compared with the Murphy button. The chief advantages claimed for the operation by McGraw were: (1) It was the simplest of all known methods; (2) it was the quickest of all operations for intestinal anastomosis; (3) there was uniform coaptation of the peritoneal surface of the entire circumference of the proximal ends; (4) there was no incision of the bowel and no blood was lost; (5) there was no escape of feces and no exposure to infection from the bowel contents; (6) the operation was followed by a minimum of shock; (7) the anastomosis was secured by first intention; (8) very few lesions were made; and (9) the bowel did not slough under the ligature. Dr. Kakels said he had made a number of experiments upon dogs, and had subsequently killed the animals at varying intervals by the administration of cyanide of potash.

His conclusions from these experiments bore out in the main the claims made for the operation by its originator. He found the operation fully as simple as the one with the Murphy button. Of the eight experimental cases, in only two was there partial cutting through of the ligature. This was probably to be explained by the peculiar anatomical conditions found in the bowel of the dog. The larger ligatures cut through more quickly because more tension could be applied to them than to the smaller ligatures. The specimens from these dogs were exhibited.

The Technique of Nephropexy, with Special Reference to a Method of Attaching the Kidney as Nearly as Possible in its Normal Position.

R. Guiteras (*Medical Record,* April 11, 1903) outlines in detail the various types of operation employed since Hahn in the fixation of the kidney, and classifies them according to certain leading features.

The author says in regard to his own method: "I denude about one-half of the posterior surface of the kidney, that nearest the convexity, leaving the anterior surface intact. I pass my sutures in such a manner through and under the reflected capsule that they hold the organs securely during the formation of adhesions that goes on after the operation, and I tie my sutures over the muscles and fasciæ in such a way as to bring the kidney in close apposition with the parietes, as nearly as possible at the normal level, and in its normal horizontal angle, with the convex border pointing outward and slightly backward."

The Differential Diagnosis Between Cystitis and Pyelitis.

Rosenfeld (*Centralblatt für innere Medizin,* No. 8) differentiates by three methods: (1) By the reaction of the urine, in uncomplicated pyelitis; it is acid in cystitis; it is alkaline in all but tubercular cases. (2) On the shape of the white and the red blood cells, the former are round if from the bladder, but distorted if from the pelvis of the kidney. The same condition is evidenced by the red cells; they are also colorless if from the kidney; the epithelia of the kidney are round and have a glistening nuclei. (3) The relation between the amount of albumin and the amount of pus is an important diagnostic point. In cystitis, although the quantity of pus be great the albumin percentage is low, whilst in pyelitis the conditions are reversed.

Gonorrhea in Women.

A. A. Hussey (*Brooklyn Medical Journal,* April, 1903) concludes his article as follows: (1) Gonorrhea is a frequent disease among married women. (2) Its effects are often disastrous to the individual, to the family, and to society. (3) It begins as an acute inflammation and soon becomes chronic, or it is chronic from the start. (4) The acute inflammation, if seen early and treated intelligently, may be cured. The chronic form is often

located in the external genitals for a time and is amenable to treatment. (5) When the inflammation has involved the tubes and ovaries the normal condition of the parts is rarely restored. (6) The treatment of gonorrhea is made difficult by the fact that the patient does not apply for treatment at the beginning of the disease. This is due in the acute cases to her ignorance of the meaning of the symptoms. (7) The best treatment is prophylactic. (8) This can be accomplished only by teaching women that urethritis and leucorrhea are often the precursors of a chronic disease that may undermine their health, cripple their reproductive organs, and not infrequently cause death.

MEDICINE.

Pancreatic Lithiasis.

Kinnicutt (*American Journal of the Medical Sciences,* December, 1902) calls attention to the extreme rarity of cases in which the existence of pancreatic lithiasis can be determined by the recovery of the characteristic concretions from the stools, and he gives brief abstracts of the only six cases previously recorded in which a positive diagnosis was made or the condition suspected during life. In his own case the patient, a woman aged forty-two, suffered in 1888 from a sudden attack of pain, which, starting in the back between the shoulders and gradually extending round the right lower intercostal spaces, was accompanied for several hours by uncontrollable nausea and vomiting. Two severe attacks, believed to be due to a cholelithiasis, occurred in 1897 and 1898. During 1901 there were five more attacks, the first of which was exceedingly severe, and the examinations of concretions and detritus passed in the stools showed them to be of pancreatic origin rather than hepatic. Several more attacks followed, the pain always commencing in the middle of the back between the shoulder-blades and extending through the body to the central epigastric region. Sometimes jaundice was an accompaniment, and in the last two attacks biliary calculi were passed. The urine at no time gave any trace of sugar.

The case is of interest as giving decisive evidence of a pancreatic lithiasis alternating with a cholelithiasis. That the pancreatic lithiasis preceded the cholelithiasis is evident from the history, while investigations upon the composition of the fat ingested pointed to a diminished flow of pancreatic secretion into the intestine prior to the last two attacks, this rendering it probable that

the pancreatic lithiasis also coexisted with the cholelithiasis with partial occlusion of the pancreatic ducts. Of the symptoms pointing to the occlusion of these ducts, none of the subjective symptoms, such as nausea, vomiting, etc., are characteristic, while the pain is indistinguishable from that occurring in cholelithiasis. The presence of abnormal quantities of undigested muscle fibers or of fat in the stools is unreliable, a deficient splitting up of the ingested fat into fatty acids and soaps being the only definite proof of the absence of the pancreatic secretion in intestinal digestion. Jaundice, as in cholelithiasis, may be either absent or present, while the presence of glycosuria is suggestive, and the decisive evidence afforded by the discovery of concretions in the stools is exceedingly rare. Although these symptoms individually, with the exception of the latter, are insufficient as a basis of diagnosis, their various combinations may be of value, and cases accompanied by glycosuria presenting attacks of obscure epigastric pain, with or without jaundice, and in which large numbers of muscle fibers are present in the stools, may reasonably be regarded as suffering from pancreatic lithiasis.

The Infectivity of Phthisis.

The following conclusions are offered by A. Hillier (*British Medical Journal,* March 14, 1903):

He holds it conclusively established that both dried tuberculous sputum dust and the minute drops coughed out by the consumptive are capable of conveying the infection. The precise proportion which each factor plays in this infection it is difficult to estimate, but there are two points in connection with the cough infection which he thinks are of special importance. In the first place, the minute cough-sprayed drop which contains a tubercle bacillus, probably in the majority of instances contains that bacillus in a condition of high degree of virulence. The bacillus contained in the minute sprayed drop comes straight from its natural soil, and is probably more potent as an agent of infection than that contained in the dust particle which has been exposed to desiccation, and in the majority of instances to some degree of light. Secondly, those sprayed drops which fall to the ground, or are deposited elsewhere, although they may not carry with them a large number of bacilli, nevertheless deposit such bacilli as they do carry under conditions which insure their rapid desiccation and formation into the smallest particles of dust. These minute drops thus add their quota of bacilli to the quantity of minute dust which alone is capable of inhalation.

With reference to the extent of the infectivity of phthisis, while the writer holds it to be an infective disease, he does not consider that the degree of this infectivity is a high one. But as against this we must set the fact that phthisis is a chronic disease, and that the chance of conveying it often extends over years.

Of those exposed to infection for brief periods, only a very small minority are infected. Of those exposed for days, weeks, or even months in a small confined atmosphere, many escape. Why many escape and others do not escape has not yet been scientifically demonstrated. But this we know, that be the causes of apparent immunity what they may, no person can develop tuberculosis who is not exposed to the possibility of invasion by the tubercle bacillus.

Empyema: A Contribution to its Bacteriology.

W. J. Bythell (*Medical Chronicle,* November, 1902) says that empyema is common in children at all ages, and is decidedly more frequent in boys than in girls. The disease resembles pneumonia in being more prevalent in spring and early summer. The pleura is infected in the great majority of cases by a process of direct invasion from a pulmonary lesion; the latter is usually a catarrhal pneumonia in children. In many cases which are apparently "primary" the source of infection is probably also an undiscovered patch of bronchopneumonia.

The microörganism which is by far the most frequently present in the empyema of children is the pneumococcus.

The clinical results of empyema depend to some extent upon the species of bacteria found within the pleura, the pneumococcic cases being on the whole the mildest. The microörganism may, however, give rise to very serious complications, either by the direct invasion of surrounding viscera or by metastatic infection.

The bacteriological examination of the pus gives other indications as to the clinical prognosis, which appear to be of considerable value: (*a*) a small number of poorly stained microorganisms which give feeble cultures usually denotes a good prognosis; (*b*) the reverse condition is not so frequently accompanied by severe clinical symptoms, especially when phagocytosis is well marked; (*c*) vigorous cultures are not in themselves a reliable sign of pathogenic activity.

The bronchial nodes are probably invaded by microörganisms from the pleural cavity in every case of empyema. The organisms are sometimes also found after death in the mesenteric nodes.

With the exception of those cases in which there are tuber-

culous lesions of the pleura or lung, the best results may be expected from resection of a rib with free drainage of the pleural cavity.

Sterilized Milk, Pasteurized Milk, or Clean Milk.

C. M. Brown (*Archives of Pediatrics,* April, 1903) says that sterilization at 212° F. is of great value, especially in cities and to the poor who lack intelligence, because it may be performed by any one, and with simple or no apparatus. Pasteurization at a temperature of 140° to 158° F. in closed vessels for fifteen minutes is much to be preferred, as the milk is little changed in its taste or chemical properties from raw milk, and this temperature is sufficient to kill the pathogenic organisms and lactic-acid-producing bacteria. But we must agree with Holt when he says that all heating of milk sufficient to kill bacteria does impair to some extent its nutritive properties, and to a degree proportionate to the height of temperature employed, and the length of time it is continued. When obtainable, fresh, pure, clean milk used raw is much to be preferred. It is now supplied to many of the large cities. There is a strong and rising demand among the laity for such milk. It can be provided to all cities and towns of even moderate size if the profession will put forth proper efforts to procure it. Under a general law all milk dealers should be licensed by the city or town in which they sell milk. Such license should give the health officer power to enter upon and inspect premises upon which the milk is produced, at any time he sees fit; and it should also carry with it a statement on the part of the dealer that all cows producing milk which he sells have been tested for and found free from tuberculosis.

The Etiology of Tuberculosis in Children.

A. Hand (*Archives of Pediatrics,* April, 1903) says that the majority of cases of tuberculosis in infants and children are apparently the result of air-borne infection.

A certain percentage of cases is of primary intestinal origin, probably the result of food infection, as those cases which were subjected to exhaustive experimental study gave bacilli resembling the bacillus of bovine tuberculosis in all of its characteristics. This group is sufficiently large to render imperative measures of prevention.

From an anatomical standpoint there is no way of distinguishing these cases of primary bronchial tuberculosis which might be

the result of food infection from those in which the infection is air-borne.

The large proportion of cases in infants suggests either a greater exposure or a less resistance to the infection as compared with children over two years of age.

The Value of the Diazo-reaction in Typhoid Fever.

J. S. Billings (*New York Medical Journal,* April 18, 1903) thinks the examination of the urine in cases of suspected typhoid fever is of value, provided that its limitations are recognized. While not so absolutely pathognomonic of typhoid fever, yet the diazo-reaction is even more constantly present in that disease than the Widal reaction. So that its absence at a period when it should be present, if the case is one of typhoid fever, is of considerable value in making a negative diagnosis.

In the majority of instances the diazo-reaction is present in the urine at least forty-eight hours earlier than Widal reaction in the blood.

It disappears much earlier than Widal reaction, however, and negative results obtained later than the second week are of little or no value.

"Doubtful reactions" have slight significance.

The Influence of Enlarged Tonsils on the Development of Children.

Wilbert (*Deutsche med. Wochenschrift,* 1903, No. 6) reports 375 cases of boys ranging from six to twelve years of age, of which 231, or 62 per cent, showed hypertrophy of the tonsils. Only 122 boys manifested symptoms of disease, while in the rest there were none. In the twelve and thirteen years the number of affected as well as the severity of the condition was reduced, which may be attributed to the retrograde changes at this age. Nervous disturbances (enuresis nocturna, chorea, retarded mental development) affected about 5 per cent; 27 per cent were affected in their hearing; 63 boys showed bilateral and 40 unilateral disturbances of hearing; chronic otitis media, 1 per cent. We must assume that a part of these diseases would undergo spontaneous cure, whilst the greater part would not improve, but in many cases become aggravated. Prognosis is better when early treatment is inaugurated.

Bacteriologic Studies of the Skin and Throat in Cases of Scarlatina.

The bacteria obtained from cultures from the skin, epidermic scales, and the surface of the tonsil in cases of scarlatina are, according to G. H. Weaver (*American Medicine,* April 18, 1903), the same as those found in the same location in health, and no one of them is constantly present except the streptococcus in the throat.

Because of the numerous cocci which grow in such cultures, and which appear in groups of two and four or bunches of the same under the microscope, it is impossible to identify them, except by a complete study of pure cultures.

Cultures made by inexperienced persons, or by those who do not fully appreciate the importance of avoiding the tongue, are especially apt to contain large diplococci or sarcinæ.

The streptococcus is present upon the tonsils of scarlatinal patients in enormous numbers in almost all cases.

The Prognostic Value of the Diazo-reaction in Pulmonary Tuberculosis.

C. Carter (*Medical News,* April 4, 1903) claims that if the urine of a case of pulmonary tuberculosis shows no diazo-reaction and a kidney lesion can be excluded, the prognosis is favorable. If the urine shows an occasional diazo-reaction, the prognosis is not necessarily grave, as only 66 per cent of the patients showing an occasional positive reaction die.

If the urine shows a continuous strong diazo-reaction, the prognosis is very grave, since a large proportion of such patients die within six months. The presence of a diazo-reaction on the first examination of a patient should not debar the case from a thorough trial of climatic treatment in a proper sanitarium.

THERAPEUTICS.

The Treatment of Constipation.

S. G. Gant (*New York Medical Journal,* April 18, 1903) says that since 1891 he has discontinued the use of drugs in the treatment of constipation, and has employed the "non-medical," by which he has been able to cure or materially benefit all patients applying to him for relief from this affection.

Massage is one of the most essential features in the treatment of chronic constipation. In addition to kneading of the colon, special massage should be given to the liver, small intestine, and rectum. In the habitual constipation, massage is a valuable aid, because it improves the circulation, stimulates nerve centers, restores tone to inactive muscular fibers, loosens adhesions, dislodges and breaks glands to renewed action, and assists in establishing normal peristalsis.

Electricity is a valuable adjunct in the treatment of constipation, and faradism has given the best results. The positive pole may be applied over the spine or within the rectum or sigmoid, and the negative is moved about over the small intestine, colon, and liver; the strength, duration, and frequency of applying the current are regulated to suit the individual case. When properly used electricity restores tonicity and stimulates peristalsis and glandular secretion.

Enemata of soap-suds or warm water are sometimes necessary early in the treatment of constipation, to secure evacuation and prevent accumulation of the feces until the bowel is able to relieve itself, but the continued daily use of injections is to be deprecated.

In addition, the patient must observe the following rules:

1. Go to stool at the same hour daily, devoting the time to securing an action, and not making the toilet a reading room.

2. Correct errors in diet, and take meals at regular hours under pleasant conditions; abstain from overindulgence, and take plenty of time to masticate the food properly.

3. Eat sufficient fruit and drink an abundance of water, especially before breakfast.

4. Take a cold bath every morning, to be followed by a thorough rubbing with a rough towel to open the pores of the skin and stimulate the circulation.

5. Indulge regularly in outdoor exercise and gymnastic movements, to improve the general condition and develop the abdominal muscles.

6. Change from a sedentary to an active occupation, if necessary.

The Treatment of Trigeminal Neuralgia.

G. Brown (*Scottish Medical and Surgical Journal,* February, 1903) advises in his treatment of this affection the administration of quinine in 10-grain doses, which may be repeated two or three times until the pain subsides. Sodium salicylate, though not so

powerful or so immediate as quinine, has given relief. It may be combined with phenacetine or antipyrin: a powder containing 5 grains each of quinine, sodium salicylate, and phenacetine. Another preparation is aspirin in 5- to 10- or even 15-grain doses. Exalgin gives good results, but its action must be watched lest it produce collapse. Begin with a small dose (2 grains), which may be gradually increased. Another remedy of the same class is pyramidon. Butyl chloral hydrate is another remedy for relieving pain; it may be given in doses of 5 to 10 grains or even more, and is best administered in solution with glycerin or syrup. Gelsemium sempervirens, in 5- to 15-minim doses of the tincture, may be employed, while gelsemine chloride may be given in doses of 1/200 to 1/100 grain. Aconite has been used with good results. Potassium iodide with bromide salts may be useful. Morphine is only used when all else fails.

Formalin in Whooping-cough.

The Bulletin of the Health Department of Chicago for the week ending February 7 contains the following: "The frightful mortality from whooping-cough this winter induces the department to call public attention to the claim of Dr. Cenex, of Bohemia, that the vapor of formalin is a specific and preventive of the disease. After citing a number of cases in which the cough was cut short within twenty-four hours, he concludes that (1) by the proper inhalation of the vapors of formalin it is possible to destroy the germs of whooping-cough, those existing on the mucous membrane of the respiratory organs, and also those in the surroundings of the patients. By this means the disease is cut short and further infection inhibited. (2) In accordance with these experiences it seems advisable that schools, hospitals, churches, and other localities should from time to time be thoroughly disinfected. It is hardly necessary to add that the treatment should be directed or administered only by a medical practitioner."

Limitations of the Dimethylamidoazobenzol Test for Free HCl in the Stomach Contents.

According to W. F. Skillman (*American Medicine,* April 18, 1903) the following conclusions may be drawn in regard to the use of dimethylamidoazobenzol as an indicator for free hydrochloric acid:

1. If the test for lactic acid is positive, Gunsburg's or Boas's reagents, or some other method, should be used to determine whether the dimethyl reaction is due to lactic acid or to free HCl.

2. If the stomach is normal both as to size and position and the peristaltic function is unimpaired, then dimethyl will give fairly accurate results.

3. If the size and position of the stomach are not normal (gastrectasis or gastroptosis), or if the peristaltic function is delayed, then Gunsburg's or Boas's tests should be first performed to test positively whether free HCl is causing the reaction, or whether it is caused by organic acids, before proceeding to titration with dimethyl.

The Surgical Treatment of Tubercular Peritonitis.

D. S. Fairchild (*Philadelphia Medical Journal,* April 18, 1903) says that if an intra-abdominal focus of tuberculosis is diagnosed or is suspected, an abdominal section should be made with the view of efficient treatment.

If a chronic tuberculosis of the peritoneum with ascites is diagnosed or believed to exist, laparotomy is indicated as soon as it is found that medical and hygienic treatment has failed.

In fibrous tuberculosis of the peritoneum the same course should be pursued, and if cheesy degeneration has not commenced or progressed too far, a certain percentage of recoveries will follow. In acute tubercular peritonitis with ascites and high temperature, laparotomy is useless; in extensive adhesive tuberculosis with matting of the intestines this operation is also useless, and the attempt to separate the adhesions is dangerous in its immediate results.

A Basis for Treatment in Pulmonary Tuberculosis.

Dr. Weber (*Therapeutische Monatshefte,* 1903, H. 1) says the venous blood possesses a powerful bactericidal property, especially for the tubercle bacillus. In lungs receiving large quantities of venous blood no tuberculosis develops, and *vice versa* the development is favored. According to Ebstein carbon dioxide protects the albuminous bodies and the glycogen from disintegration. Bunge and Maly claim that the carbon dioxide in the blood liberates a slight amount of hydrochloric acid from the sodium chloride. In phthisiotherapy it is necessary to increase the oxidizing processes which produce carbon dioxide; this is brought about

by the administration of substances easily oxidized, such as levulose and grape-sugar. The appetite is much improved in such cases. Weber administers levulose in four to six heaping teaspoonfuls daily. It may be used for sweetening milk, tea, fruits, etc. In incipient tuberculosis he urges vigorous stimulation of the appetite by means of quinine, and climatic treatment and arsenic may be indicated. If no improvement sets in or the case is advanced, he injects 10 grammes of oleum petrolatum per diem subcutaneously intrascapulæ. This substance is absorbed and converted into carbon dioxide and water, increasing the carbon dioxide in the organism. Out of 104 consumptives Weber cured 62; 21 improved, and 21 died. The cases were not selected ones, but such as usually appear in practice.

Lactic Acid Intestinal Dyspepsia.

Raczynski (*Wiener klin. Wochenschrift,* No. 12) found this condition in young infants nursed exclusively on mother's milk. Clinically they showed unrest, vomiting, distended abdomen, and frequent stools; the latter contained white curds discolored green. This condition lasts for weeks and months, and may disappear without treatment; if persistent, however, it may interfere with nutrition and growth. The author dwells on the subject of the chemical composition of the milk as being a leading factor. He also studied the acidity of the stools; in dyspeptic infants the acidity is usually high. The formation of acids is not due to the chemical changes in the food, but to the intestinal bacteria present, which appear soon after birth. Regarding the treatment of this affection the author obtained beneficial results by the administration of cow's milk.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Eye-strain in Youth, and its Modern Treatment.

A. L. Ranney (*Medical Record,* April 18, 1903) has drawn the following general conclusions:

1. Eye-strain cannot be recognized too early in youth.
2. Its scientific investigation by modern methods and its radi-

cal correction may favorably modify both physical and mental development.

3. The neglect of an existing eye-strain may in time allow it to exhaust the reserve nerve capital of the sufferer and produce untold ills both of body and mind.

4. No child should ever be allowed to begin education until it is known that its eyes are properly fitted for the work.

5. Legislative enactment should, and surely will in time, compel an eye examination of every child before it enters the public schools.

6. Teachers should also be instructed in the rudimentary steps of vision testing.

7. Tests for maladjustment of eye muscles should be made upon every child as thoroughly and intelligently as tests for errors of refraction are made prior to its education.

8. A knowledge of the possible effects upon mental and physical development cannot be too widely disseminated among parents and teachers.

9. The direct causal relationship between "eye-strain" and nervous diseases is too well established to-day to require further proof, or even to justify further discussion.

10. The modern methods of testing for anomalies of adjustment of eye muscles are the only ones that can furnish us with scientific and accurate information.

The time has happily passed when any oculist can instruct a patient to simply follow some object held before the eyes with the eyes, and then on that test alone give a final decision as to whether maladjustment of the eye muscles exists or does not exist. Two decades ago this was about all that anybody knew about eye muscles. To-day the mere tyro would not dare commit himself on such tests.

11. The cure of disease to-day is intelligently based on the search for its cause rather than on an indiscriminate use of drugs; and the prevention of diseases is rapidly becoming more important to the medical mind, and also to the laity, than its cure.

12. The detection of "eye-strain" in youth is an important step in preventive medicine, and the arrest of a nervous leak may save many a child from a permanent breakdown when an adult.

13. The study of facial expression and head posture is destined to become an important aid in diagnosis.

14. The governing boards of institutions for the feeble-minded, the epileptic, and the insane will sooner or later be

compelled to investigate more carefully and earnestly than in the past the eye conditions of their inmates.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Myositis Syphilitica.

In the *Journal of Cutaneous Diseases* for April, 1903, Dr. J. A. Fordyce, of New York, in reporting several cases of myositis syphilitica writes in part that the involvement of the muscular system by syphilis is of relatively rare occurrence.

The early so-called myalgias may be due to hyperemia with slight exudation in the connective tissue of these organs, or to irritation of the peripheral nerves by the disseminated poison of the disease. They have, as a rule, little clinical significance, as they usually rapidly disappear.

The majority of the text-books on syphilis speak only of the diffuse interstitial myositis of the early period, and the circumscribed gummatous tumors of the late stage. It is not always possible, however, to assign the cases seen in our clinics to these two groups.

In malignant precocious syphilis, gummata, usually in several muscles, have been observed in the period of the disease.

Matzenaur, in Neumann's clinic, has seen multiple diffuse myositis and gummata in the same patient, and the same conditions in the late stages of the same affection. He also called attention to the occurrence of muscle abscess following a diffuse myositis four and seven months after infection.

A single muscle gumma in late syphilis can readily be mistaken for a sarcoma or other muscle tumor or infiltration.

Another type of myositis presumably of syphilitic origin has been described by Herrick, in which a syphilitic patient suddenly developed painful swellings in the supinator longus and in the calf muscles. An examination of excised pieces of the involved tissues showed a diffuse inflammation with hemorrhages. He failed to find either vegetable or animal parasites, and attributed the condition to a specific infection ten years before the present trouble began.

The histological investigations of Matzenaur show that the initial changes in the interstitial myositis and the gummatous

variety are the same—in early syphilis the inflammatory process tending rather to diffuse changes, while in late syphilis more sharply circumscribed infiltrations result.

The blood-vessels of the interfibrillary connective tissue are first implicated, the muscle substance being secondarily involved.

The preservation of the functional integrity of the muscle can only be secured by early recognition of the nature of the disease and a prompt recourse to specific remedies.

The results of the affection are seen in the sclerotic changes which take place in the tongue as a result of chronic interstitial myositis of this organ.

The Conditions which Modify the Characters of Inflammations of the Skin, and Their Influence on Treatment.

The following general deductions are drawn by H. R. Crocker (*British Medical Journal,* March 21, 1903):

That a large proportion of inflammatory diseases of the skin are of compound origin.

That there is frequently a microbe element, and that this too might consist of more than one kind of microbe superimposed on another, such as the staphylococcus on the seborrheic microbacillus, the seborrheic microbacillus on the bottle bacillus, etc. Not only do these several mixtures produce different forms of dermatitis, but according to their mode of implantation in the skin.

That the microbic element generally requires a suitable soil for its successful implantation and propagation; that this soil varies with the age of the individual, the kind of skin he possesses, of which the modifications might be congenital or acquired; and certain of the tissue proclivities to special diseases are probably hereditary.

That intestinal and probably other visceral toxins and ptomaines play an important and often unsuspected part in producing many forms of eruption, and even that many supposed gouty eruptions are really of toxic origin from the generally present intestinal catarrh.

That many of these toxins act through the vasomotor nerves, central or peripheral, rather than directly on the skin, though they might act directly on that also.

That the cerebral nervous system acts chiefly as a controlling influence over the sympathetic system in regard to the intensity of the eruption.

That with very few exceptions the nervous system, whether vasomotor or cerebral, exercises but little influence on the character of the eruption, though it does on its distribution and intensity.

That the character of the eruption is mainly due to individual peculiarities or proclivities, of which they can not often only chronicle the result without being able to explain it.

That while with apparently the same etiology different eruptions might ensue in different individuals, in recurring eruptions in the same individual there is a remarkable constancy in the characters of the eruption and in its time and place of development.

That many general eruptions are for a long or short time of local origin, occupying only a small area before generalization.

That other serious affections start from apparently trivial causes, such as seborrhea, a superficial pustule, etc., and that it is important therefore to treat affections of the skin in as early a stage as possible, as most inflammatory eruptions have a much greater tendency to further development than they have to spontaneous involution.

That the principles of treatment depend on the due appreciation of the relative importance in any one case of the microbic, the personal peculiarities, the nervous system, and the toxic elements, and that as far as their knowledge extends the general principles of medicine apply to them, but that as their power of estimation is often at fault they have to fall back on certain conditions.

That the most reliable and comprehensive specifics are arsenic, salicin, thyroid, quinine in large doses, and potassium iodide; the first two have a wide range as compared with any others.

That except as regards pustular eruptions and those demonstrably of microparasitic origin, the character of the local treatment depends comparatively little on the diagnosis of the particular kind of dermatitis, the extent, intensity, and localization of the inflammation being the most important elements.

That in employing microbicide treatment in superficial and wide-spread eruptions the microbicide should not be irritating, or at least be capable of being at once neutralized, otherwise the increased inflammation set up defeats the aim of the therapeutist, and affords a favorable soil for further microbic developments. It is in comparatively few circumscribed microbic diseases, such as impetigo contagiosa, boils, and carbuncles, that the microbicide is the sole curative agent.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

The Scope of Vaginal Section.

H. N. Vineberg (*Medical News,* March 28, 1903) gives the following conditions as the scope of usefulness of vaginal section: (1) Pelvic abscess. (2) Pyosalpinx and ovarian abscess under certain conditions: (*a*) when the abscess is situated in the Douglas sac and is fairly movable; (*b*) when the abscess sac is not large and can be readily removed through an anterior vaginal incision; (*c*) in pyosalpinx and ovarian abscess during the acute stage, if the pus is accessible through a posterior vaginal incision, to tide over the dangerous period; and sometimes this palliative measure may prove curative. (3) Conservative surgery in diseased adnexæ. (4) Ovarian cysts. (5) Myomectomy. (6) Ectopic pregnancy: (*a*) in obscure cases to aid in diagnosis; (*b*) in cases in which it is evident there is no further hemorrhage, and when the already diffused blood has formed a hematocele in the Douglas sac at the base of the broad ligament.

Puerperal Pelvic Abscess Simulated by Ovarian Dermoid.

Vineberg (*Amer. Gynec.,* December, 1902) operated on a patient, aged thirty, a few weeks after a normal labor. At the end of the third week she was taken with severe hypogastric pains, the temperature rising to 103°. She was curetted, but the symptoms continued. Vineberg found a mass in Douglas's pouch which he had suspected to be a pelvic abscess. Vaginal section proved that it was a solid mass. An abdominal operation was performed, and the mass was found to be a dermoid tumor with a twisted pedicle, impacted in Douglas's pouch.

Adhesion of Appendix to Ovarian Stump.

Ladinsky (*Amer. Gynec.,* December, 1902) recently brought before the New York Academy of Medicine a patient on whom oöphorectomy had been performed twice. The patient continued to suffer from severe pain. On examination under anesthesia, the appendix was found in the pelvis, adherent to the stump of the previous oöphorectomy. The appendix was removed and the patient relieved of her pains.

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ORIGINAL CONTRIBUTIONS.

A PHILOSOPHICAL, ANATOMICAL, AND PSYCHOLOGICAL STUDY OF CHRISTIAN SCIENCE.

FROM A PHILOSOPHICAL STANDPOINT.

BY ROBERT M. WENLEY,
Professor of Philosophy, University of Michigan.

Regarded from the standpoint of philosophy, the movement known as Christian science it to be viewed in just the same way as many other manifestations of a similar character. The philosopher is such mainly because no phenomenon is uninteresting to him; each one contains so much matter of significance. Regarded thus, Christian science takes its place among many social occurrences of the day, which, while doubtless possessing certain interest in themselves, derive their real importance from the fact that they together point to a deep-seated state of spiritual unrest.

As students of the history of culture are aware, periods of unstable equilibrium tend to recur. Socrates saw one, Plutarch tried to reform another, Voltaire represented a third, and in these days we are spectators of and actors in a fourth. The contemporary situation bears many curious resemblances to its predecessor of the first Christian century. Vital faith lags, not because religion is dead, but because dogma prevents religion from expressing itself in such a way as to face directly up to modern problems.

Critically considered, agnosticism is the one unavoidable logical consequence of the so-called orthodox theology. And the churches, by insisting upon the retention of this medieval lumber as part of their legal contract, are actually standing in the way, not merely of what is vaguely termed advance, but of religion itself. When a condition of this kind obtains, and when, in addition, thousands of half-cultured people abound, a very real stress arises.

The half-cultured have never been trained to disengage problems from their accidental trappings and to state the central issue with exactness; still less have they the requisite insight to test nostrums put forward as solutions.

But by the very fact that they read—read all sorts of things—without possessing a standard of value, they are exposed to cruel shocks. The man who throws away the entire Bible, on perusal of an article in some science monthly, has his fits of depression, and naturally so, but he is absolutely unfit to appreciate the conditions alone under which these very fits may be cured. Consequently many are driven to the verge of despair by the pressure of spiritual difficulties which seem insoluble, and at length become ready to fly to any scheme that seems to offer aid.

In the first century the worship of Isis, of Mithra, of the Idean Mother, the Mysteries, etc., attracted masses moved thus. They flung themselves headlong into a worse superstition than the one they had cast aside.

In Christian science, esoteric Buddhism, spiritualism, and diabolism, we have the contemporary parallels to these ancient pagan "isms."

The situation is substantially the same. The problems are not widely different, and the headlong folly of the average man, who is educated just to the point of not being able to criticize himself, is just as easily satisfied.

So, viewing it generally, the philosopher says Christian science is interesting; but because it has not envisaged (apprehended intuitively or directly) the question it is put forward to answer, it is no more than another of the many straws which serve to show how the wind blows.

Christian science ranks with the thousand fallacies that crowd the historical lumber-room; the fallacies that have grown so luxuriantly out of the supposition that it is possible to solve an equation by simply canceling one side of it.

Again, it is possible to look at the affair from the side of its metaphysical presuppositions. Here, unfortunately, it altogether ceases to preserve anything of interest—like so much similar "metaphysicizing," the assumption of conditions which never did and never can exist, so far as man can know. The experience of man is limited, if you choose to use that term, by one, and only one, great fact.

It is this:

Mind is known to us along with matter; and similarly, matter is only known to us along with mind.

This ultimate datum, which gives to everything in man's world

a double aspect, and is the prime cause of every problem, the system of Christian science finds it convenient to ignore. Its dogma is that nothing exists but mind. If we were so constituted as to be able even to think this, it might be an interesting statement. But as we cannot even think of it, we may dismiss it as one of the many misapprehensions of the wayward.

If it be true, it means that every man must be a lunatic to every other man. And when we get down to universal lunacy perhaps further interference of reason is unnecessary.

FROM AN ANATOMICAL STANDPOINT.

BY J. PLAYFAIR MC MURRICH,
Chair of Anatomy, University of Michigan.

That a little knowledge is a dangerous thing is forcibly exemplified by Mrs. Eddy's theory. It is generally admitted that a certain amount of influence is maintained by the mind, or will, over the body; but it is quite as certain that this influence is exceedingly limited. The Christian scientists fall into the error, very frequent among persons whose general information is lacking, of making a part the whole, and in this case it is the lesser part which is made to stand for everything. A very slight amount of anatomical and physiological information is sufficient to demonstrate the absurdity of the Christian science beliefs; indeed, the information need be only the most fundamental principles of science.

A visit to any laboratory of pathology will suffice to demonstrate that disease, far from being a mental trouble, is invariably associated with some alteration of the material tissue of which the body is composed.

It is to-day almost a truism to state that the manifestations of life are accompanied by tissue changes. Every breath we draw, every muscular action we perform, and every thought we think involve the destruction of a certain amount of the tissues of which our bodies are composed, and under normal conditions the building up again of the tissues, to the extent to which they have been destroyed, is continually going on.

Destruction of the tissues beyond the possibility of ordinary repair means disease, and the pathologist, by the mere inspection of the tissues, can not only detect the existence of disease, but from the nature of the changes which the tissues have undergone, can state what the disease has been.

When such is the case, when every disease to which the flesh is heir is associated with a definite change of tissue, how absurd

it is to claim that disease exists only in the imagination, and can be cured by simply believing that it is imaginary.

And the statement as to the nature of the diseases given above applies not only to diseases of man, but to those which affect the lower animals and plants as well.

Are we to extend the Christian science tenets to plants, and claim that for them also disease is but the product of the imagination?

Surely this is a *reductio ad absurdum,* and yet it is a necessary following out of the assumptions. So far as a disease is concerned, what applies to its causation in man applies equally well to plants, and the idea that disease is a material change of the tissues answers as well for one as the other, and gives a complete and scientific generalization, while the belief of the Christian scientist leads to an absurdity; and science can never be absurd.

And what about these influences that bring about the changes which constitute disease? They are numerous, and we may refer only to one group of them, namely, to those small plant organisms we term bacteria. If we find a certain organism invariably associated with a certain disease producing tissue change, if we inoculate animals with this same organism and find the same changes resulting, what other conclusion can we draw but that these organisms are the cause of the disease?

The part played by microörganisms in disease is too familiar to every one to need further mention here. And yet the Christian scientist calmly disregards their existence, tells us that the typhoid fever they produce, the diphtheria, consumption, are merely figments of the imagination, and, indeed, that the organisms themselves are imaginary. Strange that we can cultivate imaginary objects, kill them, stain them, mount them on microscopic preparations, and behold them through our lenses!

The wildest delirium is tame compared with these things which are daily done in our laboratories.

To one accustomed to modern scientific methods and observation, the position of the Christian scientists is impossible. Their belief is merely one of ancient medicine dressed up in theological vestments, a theory which, dating back to barbaric fetishism, has reappeared from time to time to survive only till a fuller knowledge showed its inconsistencies and fallacies.

In the sixteenth century it was revived by Paracelsus, in the seventeenth by Von Helmont, and in the eighteenth by Statel. They held that disease was the result of the indisposition of a guardian angel, who assumed our corporeal form as a habitation, and the object of the physician was to restore the placidity of the spirit, or Archeus, for by these various names it was known.

The belief of the Christian scientist is very similar, in so far as it regards disease as a product of the mind. The early upholders of these animistic theories lacked the fuller knowledge which we now possess, and their nineteenth century successors complacently disregard that knowledge.

The name which the founder has chosen for the sect is misleading. Science is the combination of observation and deduction, and scientific methods are lacking in Mrs. Eddy's philosophy. Science is common sense, but it is nonsense when Mrs. Eddy claims that her theories, properly carried out, will do away with any necessity of food. The "mind" will become so perfect, will hold the body so in control, that there will be no waste and no need for repair. She, however, naively suggests to her followers that it perhaps would be as well to continue to take nourishment for the present, since the mind of this generation is not sufficiently refined to disregard our grosser corporeal needs.

And this is "Christian science." Alas for science! and alas for Christianity! Was ever Christ, the incarnation of "mind," free from the necessity of nourishment? Did he not encourage his disciples to eat, even on the Sabbath? Are Christian scientists more perfect than Christ? What can we think of a theory which is opposed to common sense and scientific facts, and trades under a falsely assumed title?

But some will point to the marvelous cases of cures claimed by Christian scientists as evidence of the truth of their theories. Marvelous cures are, as a rule, cause for suspicion. They have been claimed so often by quacks, whose advertisements teem with them, that most of the world take them at their true worth. The advertisements of almost any patent medicine will furnish as many "marvelous cures" of persons "given up by the doctors" as will the writings of the Christian scientists.

Strange it is that the claimants of the sole proprietorship of the truth must use the same, and no better, methods for supporting their claims as those whom they believe to be sunk in the deepest error.

These statements of "marvelous cures" mean little, for they stand mind-curers and quacks of all kinds in as good stead as they do Christian scientists. If they prove the one to possess the true method, they prove that the methods of the other are just as good.

Fads such as these take possession of the ignorant, many of whom are well-meaning, but lack the knowledge for correct judgment. They are carried away by the religious halo which invests the theory, and from disciples become propagandists, striving to

convert all to the new belief. Such misplaced enthusiasm we are all familiar with, and familiarity has, to a certain extent, bred contempt. We pity, but we do not oppose. In the present instance this is not enough. The mischief that may be wrought by the unrestrained enthusiasm of these sectaries has been demonstrated, and in other countries they have been regarded as criminals, the law meting out due punishment for their misdirected energies.

So far as one can gain a consistent statement from Mrs. Eddy's "Science and Health," the official exposition of the doctrines, we are to believe that thought, an impalpable essence of inconceivable attributes, is the sum total of man, and has absolute control over the anatomical structures that we, through ignorance and wilful error, persist in regarding as material. Disease is but wrong belief to be overcome, health only the product of right thinking.

FROM A PSYCHOLOGICAL STANDPOINT.

BY WALTER B. PILLSBURY,
Chair of Psychology, University of Michigan.

Viewed from a psychological standpoint the element of fact in Christian science can be briefly stated. It is a matter of daily experience in psychological and physiological laboratories that a thought, feeling, or other mental state, or more accurately, their concomitant in the brain, will accelerate or retard the action of the heart to a certain slight extent, will increase or decrease muscular force, and so on, just as it is a matter of common observation that shame or embarrassment will affect the nerves that control circulation, and produce a blush. So occasionally a slight indisposition, due to derangement of any one of these functions, may and frequently is benefited by a changed mental condition.

This is the grain of truth in the teachings of Christian science. The same factor has played a part in the rites of the medicine men of Africa and aboriginal America, in the cures of Mesmer and the early hypnotists, and the ignorant quackery of every age and nation.

In view of these facts, the question from its practical and legal side is merely whether you shall permit a remedy, that perhaps has had value in a very limited number of unimportant cases, to be applied universally for all diseases, however dangerous, and by persons who are in absolute ignorance of the nature of the malady.

Would it be wise to license a sect who should hold that, since

all bodily functions depend in the last analysis upon the nervous system, and since further the essential property of the nerves is irritability, all diseases should be treated by strychnine or some other drug that increases the irritability?

We have stringent laws against so-called medical men who use bread-pills alone as a remedial agent. Why should we except from prosecution the Christian scientist, whose nostrum is not less beneficial in its action, or may be more harmful?

On its theoretical side there is a similar disparity between the statements of the Christian scientist and the facts of the relation between body and mind. Thought not only has an effect upon bodily processes, but mental states are influenced by bodily processes, and particularly by the processes in what Mrs. Eddy designates "the material stratum of the human mind, called brain, which is but mortal consolidation of material mentality and its suppositional activities."

Whether this mentality be material or not, it is certain that a blood-clot or concussion affecting the substance will cause a sudden and marked disturbance in the pure ethereal thought that is said to have created and deposited its structures. Why, if all things material are so without influence, should we find Mrs. Eddy condemning the bath in such passages as "Cleanliness is next to godliness, but washing should be only for the purpose of keeping the body clean, and this can be effected without scrubbing the body daily." Water is not the natural habitat of humanity. Why, again, should tobacco and alcohol be so severely discouraged? Certainly if disease germs that possess a modicum of life, and so perhaps of thought, should have no effect upon the bodily structure or mental functions, dead chemicals should not affect the equally non-existent glands and membranes.

Modern science is impressing more and more each year the fact that every state of mind is dependent for existence upon a state of body, and that no mental process arises without a cause, that is in most cases beyond the control of the subject.

It is impossible to condemn in too strong terms the absurdities of the pseudo-psychological principles upon which the practice of Christian science is ostensibly based. It would be impossible to crowd more errors and fallacies into the pages of any book than are found throughout Mrs. Eddy's "Science and Health."

The danger in the whole school lies in the fact that their sophistical form of statement admits of no disproof. We are told that a cure will always follow sufficient faith, and that the only test of faith is the cure.

That "sufficient faith" in most cases is impossible is entirely

overlooked. Again, there will always be a certain percentage of recoveries due to natural causes. The great prevalence of hysteria, or of some more serious mental disturbance (if one judges the matter the Christian scientists read and write), also increases the proportion of cures from suggestion. They will always have a large following on the practical side from these causes.

On the other hand, the delight of the multitude in high-sounding, meaningless phrases with a mystical flavor will always draw recruits for their theories from the more ignorant and mentally degenerated members of the community.

The practical question recurs: Is it not as necessary to save such people from themselves by suitable punishment of the sick, who receive, and of the friends or paid practitioners who administer, the useless and dangerous treatment, as to protect the would-be suicide or to punish the man whose wilful ignorance results in another's death?

SOME DEVELOPMENTS IN THE THERAPY OF IODOFORM.*

BY J. J. GAINES, M.D., EXCELSIOR SPRINGS, MO.

1. *History.*—Briefly speaking, iodoform was introduced into the therapeutic family in 1837, in London and Paris. I have no record showing its medical use at that time; it may have been utilized as a surgical dressing, or some ambitious inventor may have been looking for an ingredient for the construction of a Chinese stinkpot to be used for purposes of defense. I have no doubt of its giving perfect satisfaction, when put to either use.

During the past three-score years iodoform has varied in its degree of popularity, its extremely offensive odor making it the dread of both laity and physician. Scores of so-called odorless substitutes have clamored for recognition at our hands, but we are forced to admit their inefficiency as compared with the original. In this brief treatise I shall embody a plea for the continued employment of this valuable drug, until science can offer us one which is of more value to us in the serious ailments of mankind which I shall mention later.

2. *Characteristics.*—Iodoform is produced by the action of iodine in the presence of alkalies, upon alcohol, aldehyde, ether, acetic ether, methylic alcohol, and in minute quantities when acting upon carbohydrates or proteid compounds. Its formula is CHI_3. It occurs in yellow hexagonal crystals, with odor and

*Read before the Mississippi Valley Medical Association, Oct. 16, 1902.

appearance instantly recognized and unnecessary to describe. It is insoluble in water, yet imparts to it a perceptible odor and taste. Attempts to mask the odor will either fail, or deprive the drug of its specific action. I shall not attempt to discuss the means of combating the disagreeable odor, as I consider them valueless. Iodoform is volatile, and should be kept in well-stoppered bottles, and in a cool place.

3. *Physiological Action.*—In its original state, applied locally, iodoform is mildly antiseptic, sedative, and in excessive quantity toxic, the poisonous agent being iodine. Internally, in dose of less than five grains, it exhibits its local action plus a decided antiseptic and alterative effect, the two latter being the result of the rapid and easy liberation of large quantities of free iodine. It is readily acted upon by the gastrointestinal fluids, and so far as I have observed, without deranging them in the least, and liberating the highest percentage of free iodine of any compound at our command. After administering five grains we may note the appearance of iodine in the urine in two or three hours, and which will remain apparent for several days. This proves to us that easy saturation by the drug is followed by protracted elimination, giving us prolonged contact of the remedy with the disease.

4. *Toxicology.*—There is so little difference between iodoform poisoning and that of iodine that it is unnecessary to discuss it. In the therapy as herein proposed, the problem of poisoning need not enter.

5. *Modes of Administration.*—The use of iodoform by inhalation is too important to be neglected. I have used an improvised and crudely arranged apparatus for the nebulization of iodoform emulsion, and have obtained the most happy results in the diseases where indicated, and I anxiously await the time when our inventive genius will give us a perfect nebulizer, especially one that will enable us to utilize heat in connection with the apparatus.

Internally I administer iodoform in a well fitting capsule. The dose I employ is rarely over one grain, and repeated as often as the case demands. Overdosing will disagree with some stomachs, owing to the rapid liberation of iodine. If iodoform be given with subnitrate or salicylate of bismuth, or with prepared chalk, it will be better borne. The bowels should be kept gently open with Seidlitz powder, or any of the magnesia preparations. Phosphate of soda is very useful in this connection.

Iodoform should never be prescribed with any compound of mercury, or with any opiate. In the former case a poisonous iodide will result, and in the latter it is sure to derange the stomach by opposing effects. The chief drugs that I have used as

synergistic with iodoform are quinine sulphate, bismuth subnitrate, and bismuth salicylate.

The common uses and modes of giving iodoform I shall not take your time in discussing; the well known suppositories in rectal inflammations, the emulsion in chronic cystitis, and the dressing in tubercular osteitis and other surgical affections, I am content to pass by with mere mention.

6. *Therapeutic Uses.*—By inhalation I have relieved permanently the most obstinate forms of laryngitis and bronchitis, the acute form yielding in from three to six sittings of ten minutes each, and this with a very crude home-made apparatus. Chronic forms yield readily with systematic inhalations, and I believe, from experience, that iodoform in emulsion is a specific in the treatment of bronchopulmonary affections, not excepting the tubercular, if taken in time. Again urging the production of a good thermonebulizer, I pass to the internal uses.

In subacute and chronic typhlitis, perityphlitis, and non-operable cases of appendicitis, I have used iodoform in capsule, with salicylate of bismuth and quinine, three or four times daily, with very satisfactory results. I am accustomed to keep the bowels open in these cases with a mixture of olive oil and glycerin, and I find that the benefits of using these agents without the iodoform are not permanent, and hence not satisfactory. Under treatment as outlined, the infiltration and soreness disappear in from three weeks to as many months, and a very grateful patient is almost always the result.

In tubercular peritonitis, after having failed with guaiacol, creosote, cod-liver oil, and the hypophosphites, I have been entirely satisfied with the administration of iodoform and quinine sulphate. The hectic fever and sweats disappeared, and I have been able to discharge the patient in from one to two months, able to return to his business. Just here I may say that I believe iodoform to be a specific in tuberculosis, if we but acquire the art of properly applying it. It is well worth our most earnest endeavor, in combating this most serious enemy of mankind.

In tertiary syphilis, and syphilitic cirrhosis of the liver, I have noted some good results, and I may say in this connection that I unqualifiedly condemn the use of mercury in any of the later stages of syphilis. What cannot be done with the saturation of the patient with iodine cannot be done at all. Iodoform has proven of no less value than iodide of potassium, and in many cases has acted more rapidly, giving lasting results.

In the great majority of acute or chronic diseases of the intestinal canal, whatever their origin, iodoform approaches the nature

of a specific, being sedative, alterative, and germicidal. I have employed it in small doses, one-half grain, in typhoid fever in the first and second weeks, and believe the severity of the later weeks was rendered much less. In all ulcerative diseases of the intestinal tract I use iodoform in capsule with some form of bismuth, and am rarely disappointed in results. In tubercular dysentery I am convinced that it is the only thing that approaches the nature of a specific.

In pulmonary tuberculosis I beg to append the following, clipped from the *Journal of the American Medical Association*, and which coincides materially with my own experience: "Iodoform in Pulmonary Tuberculosis: S. S. Cohen, in *American Medicine*, states that iodoform ranks as one among the limited number of drugs which have proved valuable in the treatment of tuberculosis. No other iodine compound, according to the writer, has yet been brought forward which takes its place. Its chief value, he states, is in cases presenting signs of infiltration without softening; but if limited softening be present in one portion of the lung, the drug is of service in combating the extension of infiltration elsewhere. To be beneficial in the highest degree iodoform should be given in gradually increasing doses over a long period. To begin with, one-half a grain or less may be given thrice daily after meals, and very gradually increased to the point of tolerance. In the course of two or three months a daily dose of nine or ten grains will have been reached, which may then be pushed more rapidly until fifteen grains daily are given. A good way to administer it is in capsule form (three to five grains), mixed with balsam of Peru as an excipient. If necessary a digestive agent may be added, or a dose of essence of pepsin may be given an hour later. If deemed advisable, arsenic iodide may be combined with the iodoform, they being chemically compatible and therapeutically synergistic. No one, according to the author, who has persisted in its continued use, will forsake it for any of the transient fads of the day."

In chronic Bright's disease, where an iodide is indicated, whether syphilitic or tubercular, iodoform has proven of great value in my experience of ten years' frequent meeting with such disease. The alterative dose, one-half to one grain three times a day, is quite sufficient, and will be followed in the majority of cases by great relief in ten days to two weeks. I am convinced that iodine is the best renal alterative at our command, and iodoform the best combination. It is almost without an equal in the flatulence that is so often an accompaniment of uremic poisoning, where salol is absolutely harmful. Indeed, I have abandoned the

use of salol as an intestinal antiseptic and substituted iodoform instead, and have no reason to regret it.

Having mentioned these fragmentary portions of the experience I have had in the somewhat unusual uses of iodoform, I submit to my fellow practitioners that we have in this pharmaceutical outcast one of the most powerful agents for the relief or cure of the most serious diseases of mankind. Its one objectionable feature, the unpleasant odor, is not a sufficient reason for its being discarded, and I realize that we are too liable, in our mad rush for new remedies, to forsake the old and tried for the new and many times dangerous compounds that are offered us.

I append a few cases in support of the foregoing arguments, which have been so imperfectly presented:

Case 1.—Tubercular peritonitis. Patient aged thirty-two, white, male; occupation, farmer. Marked tubercular history. Diagnosis made prior to my seeing the patient by two prominent physicians, with whom I concurred.

Symptoms, briefly: Emaciation, marked gastric disturbance; loose, irregular bowels; hectic fever and night sweats. Spinal nerves irritable, especially in the cervical region. Patient could not turn the head without turning the entire body. General neuralgia, which he called rheumatism. Had had the disease about eight months.

For six weeks I used guaiacol carbonate, cod-liver oil, creosote in capsule, and quinine. I then gave him a six-ounce bottle of syrup of hypophosphites, all without any amelioration of the symptoms or abatement of the fever. I then gave him powdered iodoform, gr. xij; quinine sulphate, gr. 1; bismuth salicylate, dr. jss; M. et ft. caps. No. xxiv. Sig.: One to be taken every three hours. When he had finished this prescription he was more comfortable in every way, and I renewed, giving grain doses of iodoform. I discharged this patient in six weeks, able to resume his work.

Case 2.—Called in emergency to see Mrs. A——, aged thirty-eight, who was visiting the Springs in search of health, and whom I had never previously seen. Patient presented the following symptoms: Edema to above knees; pulse 140. Respiration rapid and shallow. Spasmodic vomiting, with intermediate convulsions, and coma. Axillary temperature 105° (no previous fever). General appearance of the skin, icteric and dry. Pupils equal and responded feebly to light. Unable to protrude tongue, and soon lapsed into continuous stupor. My diagnosis, uremic coma. Prognosis, death at any moment.

The husband stated that no physician had ever given him an

idea of what was the matter with his wife, that they had said it was baffling, might be cancer of the liver, or "female complaint;" and my information concerning the case was very meager at that time, so I treated symptoms as best I could. I discarded pilocarpine and gave tincture aconite root in drop doses every hour, pouring it down the unconscious patient. In twenty hours the fever had abated and semiconsciousness returned. I catheterized the patient, getting about a pint of albuminous urine.

When able to swallow I gave her acetanilid gr. ij, powdered iodoform gr. j, quinine sulphate gr. j; such a dose in capsule every two hours. I gave the iodoform to sterilize the bowel, which was extremely tympanitic and sore to the touch over abdomen. When fever subsided I excluded the acetanilid and continued the iodoform and quinine in the same dose, while the patient remained under my care.

Results of treatment: Patient left her bed in two weeks; in four weeks walked about the town where she chose. The edema disappeared, and she left my care in seven weeks, able to attend to her housekeeping duties. Some albuminuria, however, remained.

I am informed that she employed an osteopath after returning to her home, and some months later died, possibly of nephritis. I mention this case to show the apparent antagonistic action of the iodoform to the progress of the disease, arresting the symptoms almost at the fatal issue, and postponing it for some months.

Case 3.—Chronic catarrh of cæcum, of twenty years' standing. Patient has been using the following formula for four months, and declares that it gives him more comfort than any remedy he has tried:

Bismuth salicylate.....5 grains.
Bismuth subnitrate .....4 grains.
Powd. iodoform .....1 grain.

M. et sig.: One such capsule between meals and at bedtime.

In this case I give no other medicine, except to keep bowels regular with olive oil and glycerin. Judging by his personal feelings the patient hopes for ultimate cure.

Case 4.—Acute typhlitis, severe. Called in consultation; the physician in charge making diagnosis of acute appendicitis, and asking for operation. I took the conservative course, and used expectant treatment, opium and high rectal enemata. When acute symptoms abated I gave quinine sulphate 3 grains, powdered iodoform 1½ grains, in capsule, and directed one such to be given every three or four hours, and keep bowels easy with olive oil and glycerin. Patient recovered in six weeks, and has been in

perfect health two years. I do not claim a rapid result, but a complete recovery leaving no sequelæ.

Case 5.—Severe subacute bronchitis, which resisted the usual remedies. Patient aged forty; marked tubercular history, his only two sisters and brother dying of the disease. This patient was not robust, and exhibited severe cough, low fever, and blood-streaked expectoration. Unfortunately I did not examine the sputum.

Four inhalations of ten minutes each cured the patient without any other medicine. Inhalant, iodoform emulsion nebulized by heat. There has been no return of the symptoms for the past three years.

Emulsion: Iodoform, muc. acacia, ol. terebinth, glycerin, castor oil.

Case 6.—Diagnosis, typhoid fever. Patient white, female, aged twenty-three. Axillary temperature at onset (about middle of first week when called), 105°. The rose-colored spots were typical during the course, and the teeth were covered with sordes. Tongue typical of typhoid, and diagnosis unquestionable.

When nature of disease was thoroughly apparent to me, I gave a capsule containing powdered iodoform gr. j, bismuth subnitrate gr. iij, quinine sulphate gr. j; such a dose every three hours. Bowels kept easy with saline water. Turpentine stupes over abdomen, antipyretic cool sponging.

Under treatment the temperature steadily declined from the first, and did not exhibit the usual erratic curves so prominent under other methods of treatment. Tympanites gradually abated, and gave little cause for concern. At the end of the second week I considered the general toxemia under perfect control. There was no delirium and no dicrotic pulse, but a barely noticeable subsultus.

I withdrew the iodoform capsule at the middle of the third week, with a maximum temperature of 99°, and completed my work with small doses of bismuth and zinc sulphocarbolate.

I do not claim for this an abortive treatment of typhoid fever, but I believe it will keep off the dangerous phenomena so often exhibited and render the patient's situation safe, much more comfortable, and materially shorten the attack. And I have never known troublesome sequelæ to follow this treatment.

In conclusion, I may say that I considered all the foregoing cases to be severe in character, and to be crucial tests for any form of treatment. And I submit that adding the *internal* uses of iodoform to its many external applications, it is one of the most *useful* (if not ornamental) agents of the Pharmacopœia at our command in treating serious disease.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE DISCOVERY OF THE GERM OF SMALLPOX.

Science has again justified her own principles in the discovery of the germ of smallpox. That smallpox was due to the presence of some organism in the body was admitted in the early days of the germ theory, and the wonder rather is that so long a time has elapsed for the curtain to be lifted, and the interesting object to be revealed to human ken. The lay press had widely heralded the announcement that Dr. Councilman, of Boston, had made this discovery, and this was recently confirmed in a paper read before the Harvard College Medical Society. The doctor stated that the research work which eventuated in this discovery had been done under his supervision at the Boston Smallpox Hospital. Vaccinia had been first studied, but owing to the immense number of germs found in the vesicles and pustules, no definite germ was there discovered. Later an anatomical study of the actual lesions of the disease revealed the organism with its definite cycles of development. Bodies one micron in diameter were found in the deep epithelial layers of the skin. These were found homogeneous, to stain with ease, to increase in size, to be irregular in shape and granular in appearance, and to be surrounded by circles which had an appearance similar to amebæ. The organism was also observed to undergo segmentation. The foregoing description indicates a resemblance to the malarial parasite.

Councilman claims for the organism a distinct cycle. At first no change was observed in the nuclei, and a vacuole was observed surrounding the organism and growing with it. At a later stage the vacuole disappeared and peculiar changes were noted in the nuclei. A ring appeared and grew, rings also appeared at the periphery, and the whole structure took on a sponge-like appearance. This finally filled the whole nucleus, which degenerated and set free the body. It did not increase much in size, but the struc-

ture appeared more complex. Ring-shaped bodies appeared, one micron in diameter, which broke up into spores. This, according to Councilman, showed, as in other protozoa, two cycles—one the intracellular and the other the intranuclear, the latter being the more complex.

It is as yet too early to decide the claims of previous investigators to priority in isolating this organism. Loeb and Puffer described certain protozoa in the blood or in local lesions in 1877 to which they attributed an etiological significance. J. C. Bay a few years ago from smallpox lymph isolated an organism he believed to be the causa morbi. These researches, however, lack in definiteness and exactness those of Councilman.

The early diagnosis of smallpox would seem to be the first great advantage that will be derived from bacteriological diagnosis. The limitation of the field of infection will go along with this early diagnosis, and it may reasonably be hoped that ultimately antitoxin medication will be achieved which will outrank in excellence the advantages which have hitherto been attained only by vaccination.

EDITORIAL NOTES.

New York State Nurses Bill.

That the trained nurses of New York consider themselves entitled to protection is evidenced by the bill which is now before the legislature of that State to amend the existing public health law. This amendment provides for the appointment of a board of examiners by the regents of the University of the State of New York who shall test candidates as to their fitness to register as nurses. A candidate in order to be eligible for examination must be over the age of twenty-one years, of good moral character, and must hold a diploma from a training school for nurses connected with a hospital giving a course of at least two years. Eligible candidates after having passed examination will be granted a certificate by the regents, which will authorize them to practice as and to style themselves registered nurses, but no other person may assume this title. Upon recommendation of the board of examiners the regents of the State of New York may in their discretion waive the examination of any persons possessing the aforementioned qualifications who shall have graduated before, or who are in training at the time of the passing of this bill, and who shall

apply in writing for such certificate within three years after the passage of this bill.

The object of this bill is to put an end to the abuses which now exist in regard to so-called trained nurses. It is to be hoped that this measure will become a law, for women who have spent two or three years in conscientious work to become trained nurses are deserving of protection against incompetents.

Treatment of the Paroxysms of Whooping-cough by Pulling the Lower Jaw Downward and Forward.

Quite recently a method for controlling the paroxysms of whooping-cough by pulling the lower jaw downward and forward has been brought to the notice of the profession by Dr. J. Sobel, of New York. During the past two years Dr. Sobel has given this method trial in ninety-six cases. Of this number there were only nine in which it proved to be ineffective. In infants and young children the method seemed less efficacious than in older ones, because, not understanding what was to be done, the little ones became frightened and their crying interfered with the manipulations. The pulling of the jaw downward and forward was observed in a number of instances to prevent the occurrence of the whoop by instantly putting an end to the paroxysm. The simplicity of this procedure should recommend it to physicians in their efforts to control this very distressing symptom of whooping-cough.

The Marvels of Radium.

The peculiar properties of radium may well excite wonder and surprise. All the metal existing in the world could be contained in a teaspoon, and has cost thousands of dollars to produce. The rays, which are known by the name of Becquerel, after the French physicist, are also remarkable. A few grammes of the metal enclosed in a bottle carried in the vest pocket burned holes in the flesh in six hours, producing sores that took weeks to heal. These rays are also fatal to the micrococcus prodigiosus, and may therefore possess great medicinal virtue. The radio-active properties seem due to a gas. The energy of these rays is prodigious, and the source is yet a mystery. The evolution of heat appears to go on without combustion, without chemical changes, and without alteration of molecular structure. This state of things must have a cause, or is the law of conservation of energy a myth?

ITEMS AND NOTES.

THE German Society of Naturalists and Medical Practitioners will hold its seventy-fifth annual meeting this year at Cassel, September 20 to 26.

DR. FINNEY, a dentist in Peru, has presented to the New York Odontological Society, through Dr. J. H. Hanning, two mummies of Peruvian Incas.

DR. ANNIE G. LYLE, of San Francisco, has been appointed an assistant to Professor Esrech, who fills the chair of pediatrics at the University of Vienna.

THE *Baltimore Underwriter* says: "Christian scientists can't be Foresters, and all life insurance companies might as well shut the door in the faces of such cranks."

THE twenty-eighth annual session of the American Academy of Medicine was held at the "Arlington," Washington, D. C., on Monday and Tuesday, May 11 and 12, 1903.

MR. H. G. WELLS, in the last issue of his essay on "Mankind in the Making," contends that "human physiology may be at once dismissed as absurdly unsuitable for school use."

A BILL reënacting the health and sanitary laws of the State and providing for county boards of health has been killed in the lower house of the legislature of the State of Minnesota.

THE Seventh International Congress of Otology will be held at Bordeaux, April 1 to 4, 1904. Dr. Lermoyez is the secretary-general, and can be addressed at Paris, Rue la Boetic, 20 bis.

THE Canadian House of Commons has voted affirmatively on a measure declaring for a prohibition of the importation, manufacture, and sale of cigarettes in the Dominion of Canada.

THE twenty-eighth annual meeting of the American Gynecological Society was held in Washington, D. C., on May 13 and 14, 1903, in the Medical Department, Columbian University, 1325 H Street.

A CONTINGENT fund of $50,000 has been set aside by the legislature of the State of Wisconsin to be utilized for the prevention of bubonic plague, Asiatic cholera, smallpox, and other dangerous diseases.

Dr. Ira Remsen, president of Johns Hopkins University, was elected vice-president and Dr. William H. Welch member of council of the National Academy of Sciences at Washington on April 22.

Dr. Johann von Mikulicz-Radecki, professor of surgery in the University of Breslau, who has received the degree of LL.D. both from Glasgow and Edinburgh, arrived in New York recently.

The hottest region on the earth is on the southwestern coast of Persia, where Persia borders on the gulf of the same name. For forty consecutive days in July and August the thermometer does not fall lower than 100°, night or day, and often mounts as high as 128°.—*Exchange.*

Dr. Florence R. Sabin, of Denver, Colo., assistant in anatomy in the Johns Hopkins University Medical School, has been awarded the prize of $1000 offered two years ago by the Naples Table Association for the best thesis of individual research in biology, physics, zoölogy, and chemistry.

On April 1 a bill changing the medical registration law in conformity with a plan approved by the State Medical Association was introduced in the senate of the legislature of the State of Minnesota. Two hundred persons appeared at a hearing before the Committee on Public Health of the Minnesota legislature in opposition to the measure making vaccination compulsory.—*Exchange.*

A young woman of Scipio, Ind., recently died of smallpox, and an investigation showed that two weeks before she was taken ill she opened an old trunk in an attic, which contained clothing that had been worn by her father just previous to his death from smallpox, just thirty-nine years ago. The health officers believe that she contracted the disease from handling the infected clothing.—*Exchange.*

A periodical has been founded by M. Furst and K. Jaffe, of Hamburg, says the *Journal of the American Medical Association*, which announces that it will treat the "border-land" questions of practical medicine and social practice, and all matters pertaining to the material and economic welfare of the profession, organization, etc., without taking part on either side in any movement, merely presenting facts in an objective, scientific way. Subscription, $2.50. Publisher, G. Fisher, of Jena. The name of the new journal is the *Monatsschrift für soziale Medizin.*

THERE will be some difficulty, according to the *Medical Record*, in providing an efficient system of ventilation for New York's subway. Although the stations will be near the surface of the streets, it is apprehended by bacteriologists that unless means are taken to provide artificial ventilation there will be fear of a vitiation of the air. Probably a system of power fans, or something equivalent to fans, will be used for ventilating purposes.

A CHEERFUL habit of mind, says the *Denver Medical Times*, is like a fountain of youth to the body. Worry kills as surely as does arsenic, but steady, moderate work is a prophylactic against many of the ills to which the flesh is heir. The greatest brain-workers have generally been long-lived (as witness Gladstone and Bismarck), provided that they did not neglect the laws of hygiene and the natural demands of the body. The physician's irregular hours for eating and sleeping tend to disorder his faculties, depress his vitality, and tempt to the use of drugs, whose fatal allurements he knows best of all.

A MAN named Fay, who had served in the Philippines, is reported to have coughed up a worm a few days ago five inches in length. Dr. Price, the surgeon at the Brooklyn Navy Yard—where Fay was working—and Dr. Sprattling, his assistant, thought it was an angleworm, but were not positive as to its species. Surgeon Sprattling, however, who was stationed in the Philippines for some time, recollected that men had reported to him that they had coughed up worms. The theory was that in drinking dirty cistern water the men swallowed the eggs of these worms, which afterward hatched in the stomach.—*Medical Record*.

A DECISION of the Prussian Medical Court of Honor in a recent case proclaimed that every physician is entitled to undertake treatment of all who apply to him in his office hours without regard to whether they have already consulted another physician or not. Also that there is no ground for a general obligation on the part of the physician that he must inform himself in regard to whether a patient applying is already under treatment of another physician. Only when special circumstances arise that indicate previous application for medical aid is such inquiry called for. When a physician knows that the applying patient is already in the care of another physician, it is obligatory on him to inform the latter that he has taken charge of the case.—*Journal of the American Medical Association*.

Some time ago we had a correspondence in our columns as to the color at birth of infants of negro parents, both sides expressing their opinion with considerable conviction. It appears that in a recent contribution to the *Review Encyclopedique,* a German physician, who has spent several years in African Togoland, states that in the equatorial regions the children are born of the same color as European infants. After two or three months the skin turns to a lilac color. Ten days later it becomes of a light chestnut shade, and it is only at the end of three or four months that the skin becomes completely black. We should be glad to hear from any other physicians who have been in African Togoland.—*New York Medical Journal.*

According to the *Lancet,* a meeting was held recently in Cairo, Egypt, to discuss the disposal of Sir Edward Cassel's gift of $200,000 for the relief of ophthalmia in that country. It was proposed to create an "ambulatory dispensary," which would consist of a tent in charge of an inspector and officer, appointed for a term of three years. By the adoption of such an "ambulatory dispensary" they would be enabled to travel around the provinces and give special attention to disease of the eye without putting the patients to the inconvenience of traveling any distance to receive treatment. The idea is to have the inspector work for two months in the provinces and then one month in Cairo. This plan, however, is only tentative, and will in all probability not be accepted, as it has many objectionable features, among which is the inability to perform properly in a tent operations upon the eye.

The Ray bill, making a diploma from a high school or college necessary to enter the second year of a medical college in Pennsylvania, which has already passed the House of Representatives, has been so amended by the Senate as to read, "provided that graduation from a literary college of good standing after two years of scientific work in the college shall be accepted by the medical council of the State of Pennsylvania as an equivalent for the first year in a recognized medical college, provided that it is accepted by the medical college as dealing adequately with chemistry, physics, physiology, anatomy, and the biological sciences." The bill was vigorously opposed by representatives of the smaller colleges in the State. There seems no doubt that it will pass as now amended. Had the bill been passed in its original shape, it would have sent many medical students out of the State, since it would have barred their entering the second year of most of the large medical schools.—*Philadelphia Medical Journal.*

NEW PUBLICATIONS.

OBSTETRICS.

In the handbook of Professor Williams the profession is provided with a thoroughly modern manual of the obstetrical art. The attention given by the author to the normal and pathological anatomy of the generative tract makes the volume as serviceable as a laboratory guide for students as its practical descriptiveness makes it a valuable handbook for the obstetrician. The work is put out in admirable form, and in the matters of illustration and press-work nothing further can be desired. The illustrative work is thoroughly artistic, and admirably elucidates the clear, incisive text of the author. This manual will doubtless enjoy long and well merited popularity.

Obstetrics. A Text-book for the Use of Students and Practitioners. By J. Whitredge Williams, Professor of Obstetrics, Johns Hopkins University. New York and London: D. Appleton & Co., 1903.

THE INTERNATIONAL MEDICAL ANNUAL.

The International Medical Annual has come to be an indispensable possession to those desirous of keeping well informed on the principles of medicine. The work of the year has been most admirably condensed in the present volume, and in a few minutes it is in the power of any one to acquaint himself with the general trend of opinion in any given line of inquiry. The contributors are all selected from the best known writers and investigators in the various departments of medical science.

The International Medical Annual. A Year-book of Treatment and Practitioners' Index. Price. $3.00; 21st year. New York: E. B. Treat & Co.

SYPHILIS IN DENTISTRY.

The necessity of dentists being thoroughly familiar with the phenomena of syphilis as they appear in the mouth and elsewhere is too obvious a fact to need extended emphasis. This little work does not contain anything particularly new to the medical profession, but if it be read carefully by those to whom it is dedicated, much that is useful and instructive may be absorbed.

Syphilis in Dentistry. By L. Blake Baldwin, M.D., and Ezra Read Larned, M.D. Chicago: E. H. Colegrove, 1903.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Suppuration of the Frontal, Ethmoid, and Sphenoid Sinuses.

E. M. Holmes (*Boston Medical and Surgical Journal,* March 19-26, 1903) discusses the affections of these sinuses in the following manner:

1. Etiology: (*a*) Anything that impairs the general health and lowers vitality; (*b*) infection by any of a numberless host of microörganisms.

2. Pathology. The pathological conditions are those that can be found in the mucous membranes of any other part of the body. If the inflammatory process should last for a sufficient length of time, then underlying bone will become involved and necrosis will follow. The discharged pus may infect the nasopharynx, and the Eustachian tube and middle ear may become secondarily infected.

3. Symptomatology. The symptoms vary greatly in character and severity. A suppurative process may be present in one or more of the nasal sinuses without giving rise to symptoms of sufficient severity to arouse the patient's attention. Excessive secretion of various character is not infrequent. Pain is a very irregular symptom. It is usually worse in the morning. Its localization depends to a considerable extent on the sinus affected: (*a*) In frontal sinus disease there is a sense of pressure at the base of the nose, over the eyes, and occasionally there is a pain and pressure about the eyes, the pressure often being complained of as deep in the head. Occasionally pain is complained of in the temples, forehead, or occiput. (*b*) In sphenoidal disease the pain is deep and boring, and there is also nearly always pain in the occiput. In addition to what may be called the strictly local symptoms there are usually a number of secondary ones. Mental depression is often very marked. The eyes are often complained of, and many eye symptoms such as strabismus and ptosis may be present.

4. Diagnosis. It is often easier to suspect suppuration of one of the accessory sinuses than it is to prove it. The best aids to diagnosis are: (*a*) Transillumination—a valuable though at times misleading aid. (*b*) Inspection. This should be done first without clearing the nose, and then with a clean nose and under

cocaine. If pus is found one must endeavor to ascertain its origin, and even when this is not possible its location will, as a rule, point to one or other of the sinuses as the seat of trouble. If there are distressing symptoms, together with a purulent discharge of unknown origin, it is justifiable to remove the whole of the middle turbinate in order to obtain a better view. (*c*) The probe and cannula. With either of these instruments valuable data can often be obtained.

5. Treatment. The fundamental principle of treatment is free drainage. All abnormal growths must be removed. Following this, either the normal openings leading to the various sinuses must be enlarged, or new openings must be made. The author discusses in some detail the best ways of operating by either method and gives an outline of the necessary after-treatment.

6. Prognosis. This is discussed at some length, and the author gives some statistics based on his own results.

Conditions Simulating Appendicitis, with Cases of Appendicular Abscess in Unusual Positions.

At a recent meeting of the London Medical Society, F. S. Eve (*Lancet,* March 14, 1903) read a paper under this title. Five cases of tuberculosis of the cæcum were related, the symptoms of which closely simulated appendicitis. All gave a history of recurrent attacks of pain, sometimes commencing suddenly. One patient was supposed for years to have suffered from gastric ulcer, the pain being referred to the epigastrium. In nearly all the cases constipation existed, but vomiting was not marked except in one instance. The chief point in which they differed from appendicitis was in the slight character of the local tenderness. A swelling of firm consistence, due to a thickened, indurated, and contracted cæcum, was observed in all. The appendix was only found once, and was not tuberculous. In one case observed by Mr. Eve in 1901 there was evidence of chronic obstruction, and a short-circuiting operation was performed with good result. The condition has been mistaken in one recorded case for carcinoma, from which however it was distinguishable clinically by the absence of leucocytosis.

Allusion was made to the difficulties in diagnosis in some instances between appendicitis and affection of the gall-bladder, kidney, and intestine, such as carcinoma, colitis, and obstruction by a band in the right iliac fossa, cases being quoted in illustration. In appendicitis the localism of the pain and the position of

the abscess were subject to great variations, owing to modifications in the length and position of the appendix itself and vagaries in the position of the cæcum and other abdominal organs. In one case the pain was referred to the right loin, owing to the tip of the appendix being attached beneath the liver, and in another the pain was always localized in the left flank.

Cases of appendicular abscess beneath the liver and about the umbilicus (owing to non-descent of the cæcum or unusual length of the appendix) were related. Great difficulty might be experienced in distinguishing appendicular abscess within the pelvis from inflammatory and suppurative affections originating in the genital organs. A case of pyosalpinx was quoted in which the pain and tenderness were referred to the right iliac fossa, and a case of suppurative ovarian cyst was related which had for three years given rise to attacks which were believed by several good observers to be due to appendicitis.

In conclusion, a case of appendicular abscess deep in the pelvis was referred to which was opened by an incision resembling that employed for external prostatectomy through the perineum between the urethra and rectum.

Multiple Ulcer of the Small Intestines.

At a recent meeting of the Berlin Society for Innere Medizin, H. Gutmann (*Medical Press,* April 15, 1903) reported a case of multiple ulcer of the small intestines.

A woman aged forty, who had never been ill before, suffered for six months from diarrhea and emaciation. Nothing was gained from her history, except that she had had neither syphilis nor tuberculosis. There was no fever, and the chest and abdominal organs were normal. The day after admission fever came on, which persisted remittently for seven weeks. Neither in the sputum nor the stools were any tubercle bacilli to be found. The patient sank from cachexia. The autopsy showed, after drawing back the omentum, numerous constrictions of the small intestines in which the parts were always thickened. The constricted parts were a bluish-white, and the thickening affected all the layers of the bowel; the mesentery also was thickened. On cutting open the constriction a circular loss of substance was found in the mucuous membrane. The bases of the ulcers were smooth, the walls precipitate. A microscopic examination showed cellular infiltration of all the layers of the gut; no giant-cells, no caseation, no tubercle bacilli. A similar infiltration was present in the

thickened parts of the cellular mesentery, but no tubercle bacilli here either. There were no caseous centers in the lymph glands, which were either shut off from the surrounding parts by connective tissue or were surrounded by nodules. Here also no tubercle bacilli were to be found. What then was the nature of the case? Probability spoke in favor of syphilis; the changes present agree fairly well with the description of Rieder, and the disease of vessels of E. Fraenkel. The changes in the lymph glands were more in favor of tuberculosis, even if bacilli, as sometimes was the case, could not be demonstrated. But it is not rare not to be able to distinguish between tuberculosis and syphilis with certainty.

Surgery of the Pancreas.

B. M. Ricketts (*Cincinnati Lancet-Clinic,* April 25, 1903) says that the pancreas is constant in man, and a normal one is seldom in an abnormal position.

The size, shape, number of lobes, bifurcations, ducts and their openings into the intestinal tract vary greatly.

Its physiology remains undetermined.

It is subject to about the same pathologic changes as the other glands.

The presence of calculi demands exploration of the gland and removal of the calculus.

Small cysts of any character, and large ones when pedunculated, should as a rule be extirpated.

Large cysts of any character, when not pedunculated, should be sutured to the abdominal wall and drained through it.

Gummata of the pancreas are amenable to syphilitic remedies.

Tubercular nodules should be excised.

Gangrenous portions of the pancreas can and should be removed.

Neoplasms, malignant or benign, should be extirpated.

A small portion of the pancreas will functionate enough to maintain life.

The entire gland should not be removed except in extreme cases of malignancy, when a piece of animal pancreas should be transplanted subcutaneously.

The efficacy of such a procedure is not certain.

Hernia of the pancreas, when gangrenous, should be amputated and sutured subcutaneously.

Incarcerated hernia as a rule should be left alone.

Gunshot, lacerated, and incised wound of the pancreas should be packed, sutured, or vessels ligated—one or all if necessary.

It is but a few such cases in which it might be necessary to suture the lacerated pancreas to the abdominal wall.

It is probably only when wounded posteriorly that such will be necessary.

Is Cancer Contagious?

Bossi (*British Medical Journal*, April 13, 1902) answers the above question decidedly in the negative, and he bases his opinion on the results of an inquiry as to the prevalence of cancer between husbands and wives. He says that if contagion is possible or probable nowhere would it be so likely to occur as between husband and wife during coition, assuming the wife to be affected with cancer of the cervix. The conditions are in favor of ready infection, for cancer of the cervix may exist for some time without the knowledge of the patient and certainly without dyspareunia (blood may follow coitus, and is sometimes the first index of the disease). The surfaces of contact are relatively large, and in a functional state ready for infection, and both tissues prone to the development of cancer. For these reasons the author thought that, if anywhere, proof of contagiousness would be found here. He accordingly selected a series of clear cases brought under his notice during the last ten years—180 in all. He divided them into four classes: in the first (where cohabitation occurred for not less than three months after the cancer of the cervix was discovered) there were 78 cases; in the second (period of six months), 49; in the third (period of nine months), 36; and in the fourth (period of not less than twelve months), 17. In no single case out of the 180 did the husband develop cancer. Further, the author wrote to several well known gynecologists asking their experiences in the matter. In this way he accounted for some thousands of cases, and yet was unable to find a single instance of contagion in this respect. The figures which have been published in support of the opposite view, namely, that cancer is contagious, he explains away on the theory of coincidence.

The Surgical Treatment of Empyema.

F. McMorron (*New York Medical Journal*, April 25, 1903) says the operative procedure in empyema, which may be considered to be radical in its nature, and which now has the confidence of clinicians and is held by many surgeons to be without doubt

the most successful treatment of this affection, is excision of the ribs and insertion of drains. The writer says that the points he wishes to emphasize are that it is necessary to open into the pleural cavity; where we seek for our object proper and free drainage, it is always a better method to resect a rib. In children the intercostal spaces are narrow, and with incision it is difficult to retain a tube of considerable size in the wound. The opposing ribs during respiration are constantly pressing the sides of the tube together, and in this respect the drainage is imperfect. After a tube has been displaced a few times it is often difficult to replace, and the fact remains that in some cases where a simple incision through the intercostal space has been made, the second operation, which has for its object the removal of a piece of rib, has to be performed in order to secure perfect drainage. It was formerly supposed that irrigation of the chest cavity was not necessary, and that it caused fatal syncope.

The Peritoneum of Animals in Disease and in Health.

Clairmont and Haberer (*Wiener klin. Wochenschrift,* No. 45, 1902) from their experiments draw the following conclusions: Increased peristalsis augments the resorptive power of the peritoneum. The introduction of air into the peritoneal cavity has no effect. The injection of different sterile fluids, such as urine, intestinal contents, etc., does not retard resorption. In beginning peritonitis resorption is increased, and slowed only in the later stages. After dry laparotomies it is retarded; in moist laparotomies this function is but little disturbed. Narcosis affects absorption in different ways. The transudation in the peritoneal cavity is not materially affected by laparotomies.

MEDICINE.

Degeneration of the Leucocyte.

John C. Da Costa (*American Medicine,* April 11, 1903) says the viscosity of the erythrocytes is influenced by cellular and plasma alterations, the nature of which is obscure. The viscosity is exaggerated by the direct influence of various toxic agencies, and is diminished in many anemic states. This phase of cellular pathology is interesting from an experimental point of view, rather than as finding of clinical application.

Simple decoloration illustrates the earliest retrograde change affecting the erythrocytes, and its intensity generally corresponds to the severity of the anemic process by which it is excited. The change may exist alone, as in the milder forms of anemia, or it may be combined with graver necrotic degeneration of the cells, in anemias of greater severity.

Deformities of shape and size are common to all pathologic blood, the degree to which such changes develop being related to the intensity of the blood impoverishment. Megalocytosis is a more serious sign than microcytosis.

Atypical staining of the erythrocytes betrays an impairment of function, and as a rule is found most commonly in corpuscles whose hemoglobin content is subnormal. It is most striking in anemias of the primary type.

The prevalence of megaloblasts indicates a fetal reversion of the bone marrow, and stamps the blood changes as pernicious, except in the anemias symptomatic of *Bothriocephalus latus* infection and of nitrobenzol poisoning. The presence of megaloblasts indicates a severe anemia, but not necessarily one of fatal outcome.

Granular basophilia, whatever may be its exact origin, should be interpreted as a sign of degeneration. It is a constant blood finding in but a single condition—lead poisoning—but is associated with many diseases involving a variable degree of blood deterioration. The experimental basophilia excited by the administration of preparations of hemoglobin warrants a doubt as to the wisdom of using such medicaments as substitutes for iron in the treatment of anemia.

Antistreptococcic Serum and its Use in Malignant Endocarditis.

Cyril Ogle (*Lancet,* March 14, 1903) says the therapeutic value of injections of antistreptococcic serum may be said to be still uncertain. This seems to be due in great part to the indiscriminate way in which it has been tried and the results have been recorded. It appears to be established by laboratory experiments that this serum (1) is of such a nature as to be of great value against streptococci only, and probably only against that variety or those varieties of streptococci by means of which it had been prepared; and (2) that it leads to the destruction of these organisms and does not merely neutralize toxic products, as does antidiphtheritic serum, for example, in the case of diphtheria—that is to say, it is directly or indirectly germicidal and not anti-

toxic in its action. In order to demonstrate the value of this treatment, therefore, it should be shown that the above conditions have been fulfilled. In most examples recorded of its use this has not been kept in mind.

The writer concludes from his experience: (1) That the gravest symptoms, combined with streptococcic infection, even of the blood stream, are not incompatible with recovery if treated by injections of antistreptococcic serum; (2) that is true also in malignant endocarditis, but here the chances are probably less favorable on account of the colony of micrococci involved in the vegetations in constant contact with the blood stream; (3) that in malignant endocarditis staphylococci are frequent or a mixed infection of staphylococci and streptococci; and (4) that if an examination of the blood be negative it would be prudent therefore to use injections of antistaphylococcic together with antistreptococcic serum.

Bacteriology of Acute Articular Rheumatism.

Meyer (*Zeitschrift für klin. Medicin,* Bd. 60) examined twenty-five cases of polyarthritis with angina and one case of endocarditis verrucosa by taking the blood and joint fluids and transplanting them to different culture media; the results he obtained by this method were negative. By taking the secretions of the tonsils and transferring them to peptone or ascitic bouillon, and after twenty-four hours injecting rabbits intravenously, he isolated a bacterium which was a small diplococcus with the cultural characteristics of the streptococcus. They are only moderately pathogenic to animals, and it is not possible to increase their virulence by repeated animal inoculations. The effects on the rabbits intravenously inoculated were swelling of the joints and malignant endocarditis in 21 out of 100 animals. It is possible to isolate the organism from the articular exudate. Being unable to produce the virulent characteristics of the streptococcus, and as its morphology remained constant, Meyer claims it to be the etiological factor in articular rheumatism.

Liver Tests.

J. Seegen (*Wiener klinische Wochenschrift*) says that French authors have used the presence or absence of sugar or glycogen in the liver as a means of determining whether or not an individual has died a sudden death. Seegen had the opportunity to examine

the livers of three persons who whilst in perfect health succumbed to asphyxia; he also made a number of experiments on dogs. He showed that in deaths due to asphxia the quantity of sugar is decidedly diminished, and that the glycogen is often reduced to *nil.* He obtained the same results in poisoning with curare, chloroform, morphine, etc. Although sugar formation in the liver is reduced in these poisonings and the quantity of sugar in the blood increased twofold, he comes to the conclusion that the French authors' assumption is incorrect, though if glycogen is missing altogether in the liver of an individual previously healthy it may be taken for proof that that person died from asphyxia or carbon dioxide poisoning.

Physiology and Pharmacology of the Kidney Functions.

O. Loewi (*Archiv für experimentelle Path. und Pharmakol.*) on the ground of his very interesting experiments holds the following theories on the excretion of urine:

1. In the glomerulus the filtration occurs not only of water, but of other freely soluble crystalloids found in the blood.

2. In the tubular epithelium an excretion takes place of such substances which occur in the blood as colloids.

3. This secretive function is not analogous to that of a gland proper.

4. In the tubules resorption of water and certain soluble substances takes place. Regarding the action of the diuretics he shows that they have no effect on the secretive power of the kidney.

Are Boric Acid and Borax Deleterious to the System?

Rost (*Deutsche med. Wochenschrift,* No. 8, 1903), contrary to the arguments of Liebriechs that borax and boric acid should be considered useful to the human organism, attempts along with other authors to show that both these substances have a decided pharmacological reaction. From the experiments conducted by him he draws the following conclusions:

1. Under certain conditions in the animal experiment they cause vomiting.

2. Diarrhea is often due to the action of the borates.

3. They reduce the power for the assimilation of food.

4. They reduce body weight.

5. The elimination of borax and boric acid from the human system is so slow that we must figure on its accumulative action.

The Prevention of Snoring.

Konrad Kuster (*Deutsche med. Wochenschrift*, No. 41) found that with the exception of certain diseases such as hypertrophied tonsils, adenoids, etc., which obstruct nasal breathing, snoring is only a habit which may easily be overcome. Snoring is due to the patency of the mouth during sleep; the snorer stops snoring as soon as the mouth is closed. The condition is aggravated when the patient lies on his back. The author constructed a bandage to hold up the lower jaw and to prevent its dropping during sleep. These bandages may be used on children who habitually sleep with their mouth open, thus producing catarrhal conditions, deafness, etc. They should be applied every night until the child has become used to nasal breathing.

Paludismus Chronicus or Malarial Cachexia.

M. Bonnette (*Medical Press,* April 22, 1903) thinks he has solved the differential diagnosis between chronic paludism and cachectic malaria, taking the increment of weight as his guide. If after admission into hospital the weight curve does not begin to rise after two months' residence, but remains stationary, or even falls to the end of the fourth month, the patient may be discharged as incurable because the cachectic state will probably go on increasing till death ends the struggle. In this case traces of syphilism or chronic alcoholism are usually present.

THERAPEUTICS.

Further Observations on the Treatment of Smallpox by the Serum of Immunized Heifers.

R. S. Thomson and J. Brownlee (*Lancet,* April 4, 1903) give an account of thirteen cases in which large doses of serum were administered. Their experiences with these cases have led them to the following conclusions:

No action of any kind was observed in the hemorrhagic cases treated with serum. In Cases 1 and 2, as the serum was administered only twenty-four hours before death, there was probably too little time for it to exercise any influence; but in the third patient, who died a week after the injection, there was probably sufficient time for the influence of an immunizing agent to become

apparent, had the serum contained such substance in sufficient amount. (2) In certain cases in which the serum was administered from eight to eighteen days before death or commencing desiccation, no influence whatever seemed to be exercised upon the course of the disease, though in these cases there was ample time for the serum to act. (3) In the remaining six cases the serum was administered from four to seven days before desiccation commenced. In all of these the course was modified, and an immunizing influence was manifested; but as all, with two exceptions, were undoubtedly vaccinated, it is impossible to determine whether the modified course resulted from the primary vaccination or from the treatment. (4) Case 13 shows that the serum completely failed to modify the course of a revaccination. (5) It is possible that the eruption, which appeared on the eighth day after the serum was administered, may have been due to the presence in the serum of some agent identical with, or closely resembling, substance present in the blood of variolous patients. (6) That the serum in Case 13 did exercise some influence upon the tissues, though none so far could be determined on the vaccination, is suggested by the development of the cutaneous erythema on the eighth day after the administration of serum was begun. Details of this eruption and of its distribution have already been given, but it may be observed here that the characters and distribution were precisely those so frequently present in the erythematous and some other of the prodromal eruptions so commonly found in variola and varicella, and exceptionally after vaccination. This suggests that some active body may be present in the serum in sufficient quantity to produce a distinct reaction in the absence of variola—that is to say, when the individual has not been immunized by passing through the earlier stage of smallpox against the toxins presumably present in the serum.

The Application of Adrenalin to Irreducible Hemorrhoids with Threatened Strangulation.

At the meeting of the Société Médicale des Hôpitaux of Paris, on January 23, M. A. Mosse (*Lancet,* April, 1903) called attention to the value of the application of adrenalin to irreducible hemorrhoids threatened with strangulation—a method recommended by M. Bouchard in the *Presse Médicale* of December 31, 1902. A man aged thirty-six years was admitted to hospital on December 18, 1902, with a painful hemorrhoidal mass which

extended three or four centimeters from the anus. It consisted of external hemorrhoids which covered black internal hemorrhoids. Symptoms began five days before with pain and swelling in the anal region. A warm bath was ordered. On the following day the condition was little changed. A tampon of cotton-wool soaked in a solution of adrenalin 1 in 2000 was placed in contact with the most turgescent part of the hemorrhoids. In eight minutes the part became paler and the turgescence diminished. The same effect was produced by applying adrenalin to the other parts. The patient became more comfortable. He passed a better night than before the application, but the tension and volume of the hemorrhoids seemed greater than when the adrenalin had produced its immediate effect. A tampon soaked in solution of adrenalin 1 in 1000 was placed in contact with the internal as well as the external hemorrhoids. The congestion and pain diminished more rapidly than on the previous day. In thirty minutes the right side of the external swelling subsided and lost its color, while the skin formed folds. Another tampon was applied, and the left side subsided, and the patient could sit up and became free from pain. But digital pressure provoked pain and contraction of the sphincter, and it was thought best to postpone reduction of the hemorrhoids. Under the influence of the adrenalin the pulse fell to 54. In the evening reduction was easily performed. During the night two stools were passed without pain. On December 21 the patient did not complain of hemorrhoids, but examination showed that they had recurred, no doubt as the result of defecation, but they were much smaller than before and strangulation was not threatened. Under further application of a 1-in-1000 solution of adrenalin recovery became complete. Though it cannot be said that the adrenalin cured the patient of his hemorrhoids, it obviated an operation, which otherwise seemed necessary.

Artificial Abscesses in the Treatment of Puerperal Sepsis.

M. L. Hoff (*Scottish Medical and Surgical Journal*, April, 1903) relates two cases of puerperal sepsis in which artificial abscesses were produced by the subcutaneous injection of turpentine.

The first was a primipara, who fevered on the second day after a normal delivery. She grew worse, and on the ninth day he injected two cubic centimeters of turpentine in the thigh. Abscess

development showed in two days, and there was slight improvement both in temperature and general condition. The injection was repeated next day. Improvement went on steadily for four days, when the temperature again rose. A third injection was made, and from the second day after the abscesses began to develop the betterment was continuous. The abscesses were successively opened on the twenty-ninth, thirty-third, and thirty-eighth days post-partum. The fluid was pus-like and smelt of turpentine.

The second case was also a primipara. The waters had come away six days before delivery. Hoff delivered the head, which was at the vulva, with forceps, and the perineum was so slightly torn that it did not need suture. The patient had a severe rigor immediately afterward. Turpentine injections were made on the eighth and eleventh days, and the patient improved steadily till the twenty-fourth day, when the temperature again rose, and two days later she had again a severe rigor. She had bloody urine, but a third injection of turpentine was made. The first two abscesses had opened spontaneously before the relapse. It is not very safe to reason from two cases as to the efficacy of any mode of treating puerperal sepsis, but both of the cases were fairly severe, with temperatures up to 106° F., and they are enough to attract attention. Whether the abscesses are local factories of antitoxins or of leucocytes is a question we must leave to the bacteriologist. The method is rather painful, and a preliminary dose of morphine is advisable.

Oxygenated Water.

At a recent meeting of the Paris Academy, M. Lucas-Championnière (*Lancet*, April 4, 1903) laid before the society some researches by M. Maget and M. Plante on the use of oxygenated water employed as a spray for the disinfection of tortuous cavities. It was thought that the heating and the nebulization of the solution would cause it to lose most of its oxygen and consequently most of its disinfective power; as a matter of fact the spray of oxygenated water contains only a portion of the oxygen contained in the original solution. M. Maget and M. Plante sought by experiment to discover how much oxygen was lost by distillation, and they found that in oxygenated waters (solution of hydrogen peroxide) containing from nine to eleven volumes of oxygen the average quantity found in the distillate varied between one and two volumes. Although from these results it may be estimated

that the quantity of oxygen in the spray would be small, yet there is enough to give it real therapeutic value. M. Lucas-Championnière performed some control experiments and found that his results on the whole were comparable to those of M. Maget and M. Plante. As a rule, though, he obtained smaller quantities of oxygen in his distillate than they did. M. Lucas-Championnière considers that the net results of all the experiments go to show that solutions of hydrogen peroxide have a real therapeutic value, even when used as spray.

The Curative Powers of the X-rays upon Lupus and Malignant Growth.

Thos. J. Buchanan (*Philadelphia Medical Journal,* April 25, 1903) says that lupus, superficial epitheliomata, rodent ulcers, eczema, and many kindred skin affections can positively in many cases be cured with the *x*-rays.

The growth of deep-seated carcinomata can sometimes be retarded and the pain very much lessened by means of the *x*-rays, but that such patients can be permanently cured is as yet not demonstrated.

A tube of medium high vacuum is better suited for *x*-ray therapy than a tube of low power, particularly for deep-seated carcinomata.

The part exposed should never be nearer the tube than twelve inches.

An exposure should never last longer than five or ten minutes at one sitting.

An interval of three or four days should intervene between sittings.

In order to produce a cure it is neither necessary to produce a burn nor to cause any reaction whatever.

All cases of inoperable carcinomata, sarcomata, etc., should be treated with the *x*-rays before they are abandoned as hopeless.

The operator must be one skilled in the use of *x*-ray apparatus.

After the suspension of treatment, carcinomata show a strong disposition to return quickly.

Antistaphylococcic Serum.

Proscher (*Berliner klin. Wochenschrift,* No. 12, 1903) obtained the serum from goats which were immunized with injections of virulent staphylococcus cultures. After four weeks' treat-

ment the serum of these animals in doses of 1.5 cubic centimeters protected rabbits which had received five to seven times the fatal dose of the living organism. It agglutinated the staphylococcus cultures which were used for the purpose of immunization in dilutions of 1:2560, and protected these cultures from a double-strength staphylolysin. For obtaining large quantities of serum it is advisable to use the horse, as this animal normally possesses an antibody against staphylolysin, and the immunization is thus easier to accomplish than with the goat. The clinical application will show whether it is deserving of a place with the specific curative agents.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Hemorrhage After Tonsillotomy.

Dr. Leipziger (*Laryngoscope,* vol. xii, No. 2), after investigation regarding the frequency of dangerous hemorrhage after tonsillotomy, has come to believe that "tonsillotomy is more dangerous to the surgeon than to the patient." A search through the files of the *American Journal of the Medical Sciences* from 1827 to 1902 failed to reveal any death recorded from tonsillotomy, although several authors state that deaths have been reported, but do not say where or by whom.

Fuller quotes Sajous as stating that profuse hemorrhage occurs about once in 500 cases, while an alarming flow does not occur once in 1000 times, and accepts this proportion from the records of Cohen, Mackenzie, and his own expeirence.

Leipziger gives an account of an instance where after prolonged oozing for seven hours he administered a hypodermic of one-fourth grain of morphine and one-fiftieth of atropine. The patient promptly fell asleep and slept four hours. As the bleeding soon began the dose was repeated, followed by a sleep of six hours: there was no further bleeding.

The author draws the following conclusions. He found in the journals cases of alarming hemorrhage, but could not find reports of fatal cases; some were secondary, some continued off and on as long as nine days:

The operation should never be done at the surgeon's office, but either at the home of the patient or at a well equipped hospital.

The usual compensation for the operation is ridiculously small compared to the responsibility assumed by the surgeon, and the danger arising from hemorrhage.

Cessation of parenchymatous bleeding is probably affected by syncope favoring coagulation, or through vasomotor influence brought on by unconsciousness. If the latter is true, removal of nervous excitement by hypodermics of morphine may prove to be the most desirable agent to check hemorrhage.

The use of styptics seems ineffectual; their application is often injurious from the gagging and irritation produced, which in turn increase the bleeding and the nervous excitement.

These conclusions must be modified if a report in the *Wiener klinische Wochenschrift* of February 27, 1902, by Damionos is correct. The writer says that of 159 cases reported of serious bleeding 7 were fatal.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Bossi's Dilator.

Dr. Osterlob (*Centralbl. f. Gyn.*, 1903, No. 3) reports two cases: (1) Eclampsia in a primipara of twenty-eight; operation two months before term. During dilatation the cervix was much lacerated, especially in the right commissure, by a tear, which was further extended into the parametrium during the extraction of the child after version. The whole operation lasted an hour. There was recovery with healing of the laceration in fourteen days. The urine was increased in quantity even on the third day to 2000 cubic centimeters, and remained free from albumen. (2) An absorption at the end of the fifth month was terminated by the use of Bossi's dilator, without any laceration and without any subsequent reaction.

Pseudocyesis in General Paralytics.

Dupre (*Journal of Mental Pathology*, November, 1902) says that general paralytics often imagine themselves pregnant, but he has always found such cases connected with hysteria. In one,

a woman aged thirty, with distinct somatic and psychic symptoms of general paralysis, temporary mental confusion, hebetude and obtusion of the intellect, the pseudocyesis was expressed by most characteristic external appearances, the volume and shape of the abdomen was significant, and even the gait specific of her imaginary condition. Direct examination proved that neither pregnancy nor any abnormal condition of the genitalia existed, but when so informed she merely smiled incredulously, persisted in her belief, and had the lying-in linen prepared. The menstrual flow did not appear till after the expiration of the supposed normal term; the abnormal size of the abdomen disappeared some time later.

Congenital Perforation of the Parietal Bones.

Piersol (*University Pennsylvania Medical Bulletin*, vol. xv, Nos. 6-7) reports an instance of this rare anomaly. There were two elliptical perforations, almost perfectly symmetrical in size and position; the right measured 23 by 10.5 millimeters, the left was slightly shorter but a little wider; the intervening ridge of bone measured 33 millimeters, and showed no trace of the sagittal suture, but there was a groove for the longitudinal sinus on its inner surface. There were two parietal foramina in addition to the perforations; the perforations were closed by a dense membrane formed by the inseparably blended epicranium and dura mater, without any appreciable blood-vessels except a few perforating branches of small size. No doubt this anomaly is due to excessive intracranial pressure, the cause of which has not been determined.

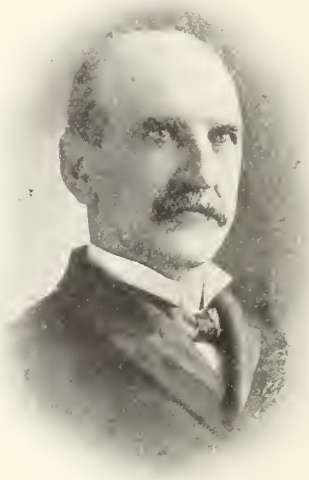
The Origin of the Liquor Amnii.

Silberstein (*Archiv f. Gyn.*, Heft 3, 1903), in an essay which obtained a prize at Berlin in 1901, concludes that liquor amnii depends chiefly upon the activity of the fetal kidneys. In a case of uniovular twins of the fifth month, the one fetus exhibited a greater development, especially of the heart, kidneys and bladder, and likewise polyhydramnios; the liquor amnii of the other was deficient in quantity.

OBITUARY.

DR. MATTHEW GARDNER, OF SAN FRANCISCO.

The profession has sustained a loss in the death of Dr. Matthew Gardner, of San Francisco, chief surgeon of the Southern Pacific Hospital. Dr. Gardner was taken away in the prime of life, from an attack of appendicitis, for which he had resorted to operative procedures. The circumstances surrounding his death were peculiarly touching. During the three years which he presided over the Southern Pacific Hospital, over one thousand cases of appendicitis had been successfully operated upon, yet when the turn of the chief surgeon came, the result was destined to be otherwise. Dr. Gardner graduated from McGill University in 1871, and was a popular and successful surgeon, well known beyond the limits of his immediate practice.



In a letter of instruction to the acting assistant surgeons, U. S. P. H. and M. H. S., assigned to fruit ports in Central and South America, to inspect vessels, their cargoes, and crews bound for the United States, Surgeon-General Wyman calls attention to the spread of yellow fever by the stegomia fasciata mosquito, and requests that special precautions be taken to prevent the presence of these insects aboard vessels.

The Morphine Habit—Report of a Case.

Editor Medical Summary:

I have been deeply interested in the morphine habit and its treatment for a long time, and have tried many of the much advertised, so-called home-cures on the poor unfortunate individuals that have come to me imploring for help. Reluctantly, though through sympathy, I would take charge of these cases, but, whenever I used one of the above mentioned remedies I would soon have on my hands almost a raving maniac, and then be compelled to fall back on my own resources, which usually were the bromides (Peacock's preferred), hyoscyamus, in some form, with quinine and strychnine as a tonic. In order to relax the locked up secretions, I generally give calomel and podophyllin, with hot baths of some kind. Here, by the way, allow me to say that the Betz apparatus would come in most admirably. I have often longed to try it, but thus far I have been compelled to forego its use.

I have brushed along for years, trying this and that remedy, generally "holding the fort till the enemy retreated," as it were, or keeping the morphine away till nature stepped in and did the work. However, I became so discouraged with the difficulties encountered in the treatment of these cases, that I had almost concluded not to accept another one. But, some six months ago, my attention was called to Mandragorine Tablets, for hypodermic or internal use, prepared by the James Alkaloidal Co., of St. Louis, Mo., and after careful perusal of their literature on the subject, I concluded to give this method a trial in the next case that presented itself to me for treatment.

I did not have to wait long before a young man, about twenty-eight years of age, called, asking me to take charge of his case. He was of a rather dark complexion, nervous temperament, intelligent and energetic. His usual weight had been about 145 pounds, but now he was bloated and weighed 180 pounds. Extremely nervous, no appetite, and could not fall asleep until about four o'clock in the morning. At times he was very talkative; other times very sullen, and desirous of being left alone, and on several occasions he was seen slipping a razor into his pocket, and denied each time (to his father) that he had anything of the kind about his person. When made to give it up he got very cross about it. He is now using about fifteen grains of morphine per day, hypodermically. Greatest amount used in one day was twenty-six grains. He says he first began using opium about eight years ago, in California, in one of those Chinese smoking houses, and got so he smoked as high as 125 "coasters" per day. On leaving there, he applied to a physician who said he would cure him, and he put him on morphine.

I gave him calomel, bismuth and sulphocarbolate of zinc, for his bowels, and the bromides to quiet his nerves, but I found that in his case the tincture of cannabis indica, five drops to a dose, answered the best, and gradually reduced the morphine to an average of five grains daily. I had him constantly watched, both day and night, but I could see no improvement in his mind—if anything, he seemed to be more rattled, and as he began to clamor for treatment by injection (hypodermic), I secured a case of the Mandragorine Tablets, and started in using them, and strange to say, I had no more trouble with him, as he began to sleep well, eat well, and quiet down in every way. He began to act and talk with more intelligence, but would still get things mixed up. Before the tablets of the second case were all gone, he discontinued all medicine. He said he had no desire for anything; only when he saw anyone smoking and he smelled the smoke of the cigar, he wanted to smoke, too. Yet he does not use tobacco in any form. He used to smoke a cigar once in a while.

The result of it all is that the man is now well in mind and body. It is now four months since he discontinued taking the medicine, and he told me that he had given up all hope before he began treatment, and on several occasions he had made up his mind to commit suicide, but something had happened to prevent him.

This is not written to advertise Mandragorine Tablets, but is a truthful and honest report of a case in practice.

J. S. Leachman, M.D.

Higley, Okla.

CASCARENNA

A combination of Cascara Sagrada, Senna, and Potassium and Sodium Tartrate, with correctives and aromatics, embodying the valuable tonic property of *rhamnus purshiana*.

Solves the Problem of Infantile Constipation.

Better than any other preparation it meets the demand for a pleasant (and at the same time active) cathartic for infants and young children.

Write for leaflet giving fuller particulars.

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An efficient Alkaline and Antiseptic Solution, adapted to the needs of Rhinologists, Gynecologists, Genito-Urinary Surgeons and General Practitioners.

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Valuable in the treatment of catarrhal inflammations of the nose and throat, in cystitis and other genito-urinary affections, in leucorrhea and uterine diseases, etc.

Literature promptly furnished on request.

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ALKATHYMOL
EACH FLUIDOUNCE CONTAINS
An efficient non-irritating deodorant and alkaline antiseptic solution for general use
When employed as a gargle, mouth wash, nasal spray or inhalant this product should be diluted with four volumes of water.
PARKE, DAVIS & CO.
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Within the 40 pages of text of the AGE, not a single line of advertising is ever printed. There are no advertising inserts; no commercial notes of any description whatsoever. We regard each subscription as a contract with the physician to furnish him semi-monthly with 40 pages of the most reliable information that can possibly be collated.

Guarding your rights along these lines as carefully as we do, we beg of you to read the announcements of our advertisers, and favor them with inquiries and requests for samples; and when so doing, please be so kind as to mention having seen the advertisement in the MEDICAL AGE.

To the notes below and on the following pages, also in future issues, we respectfully direct your attention.

Very truly yours,

THE BUSINESS MANAGER,
Box 484, Detroit, Michigan.

NOT OPIATES, BUT ANTIPHLOGISTINE.—Pain is the greatest instrument of torture with which the practitioner has to contend. It is the one system to which the laity attach the utmost importance. Absence of pain is to the patient always suggestive of improvement. Its presence especially in uterine affections causes apprehension of operation, and for relief of those cases who will not submit to operation, and in inoperable conditions, Antiphlogistine strongly recommends itself, not only as a palliative measure but an excellent remedial agent. This fact has been successfully demonstrated by the gynecologist. Its value in acute and chronic conditions of the ovary and uterus is prompt, permanent, and certain.

Two different methods of application are permissible, each exercising a distinct function in therapeutics.

During menstruation the introduction of any medicinal agent into the vagina is contraindicated, and at this period the pain of catamenial irregularities can best be controlled by applying Antiphlogistine over the abdomen warm and thick, and covering with cotton and a compress. This practice persisted in for several periods prevents headache, lumbar pain, and other vicarious concomitant symptoms. Many women who have been physically incapacitated for a day or two each month have been permanently relieved by the systematic use of Antiphlogistine at each menstrual illness. A potent influence is exerted over the sympathetic system, which is so intimately associated with the physiological functions of the uterus that efferent stimulation neutralizes afferent irritation.

In the interval between menses, Antiphlogistine is successfully applied to the cervix of the uterus in the following manner: Make a small gauze sack and fill it with Antiphlogistine slightly larger in volume than the ordinary cotton tampon. Tie a string around the improvised sack and pass the Antiphlogistine tampon with dressing-forceps through the vaginal speculum to the os of the uterus, molding around the cervix. Through the induction of osmosis and dialysis of intercellular fluid, intramural tension is quickly reduced, and local analgesia and undisturbed cervical drainage follow. For relief of a patulous uterus, the indurated cervix of endometritis, and all irregularities of menstruation, including amenorrhea and dysmenorrhea, this treatment is far superior to the ordinary glycerin tampon, rendering marvelous results to the clinician and patient.

MERIT AND RELIABILITY, WITH CONSEQUENT SUCCESS.—We are advised that our old friend, "The Antikamnia Chemical Company," for many years located at No. 1723 Olive Street, St. Louis, Mo., has moved into its new home, Nos. 1622-1624-1626 Pine Street, in said city. The new laboratory is fully equipped with all the latest chemical appliances and machinery, which afford increased and needed capacity for the manufacture of the well known and reliable Antikamnia Preparations. The company's sales during 1902 were the largest in the history of their business, and that the demand for their products is constantly growing is demonstrated by the fact that the first three months of this year show a pronounced

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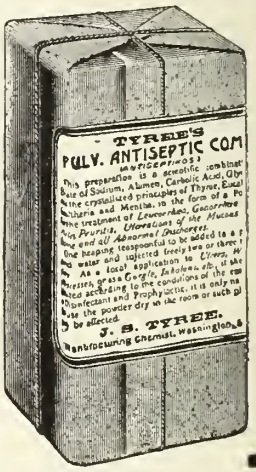
TYREE'S ANTISEPTIC POWDER

TYREE'S POWDER has achieved singular distinction in this country and Europe as an obstetrical and gynecological antiseptic, and recent experiments in several large hospitals indicate that it is of even greater value as a general antiseptic. You will appreciate at once the wonderful convenience and accuracy of a preparation that permits you to prepare in an instant an antiseptic solution of any strength you may desire, which, unlike Carbolic and Bichloride, can be used under all circumstances without the slightest injurious effects to your hands or your patient.



MR. J. S. TYREE, Washington, D. C.
DEAR SIR:
I have used Tyree's Antiseptic Powder quite extensively in hospital and private practice in surgical cases and find it invaluable as an antiseptic, deodorizer and disinfectant. I am,
Very truly yours,
FREDERICK REMINGTON, M.D.,
Surgeon to Monroe County Hospital,
Rochester, N. Y.

A 2-ounce package will be sent upon receipt of 10c

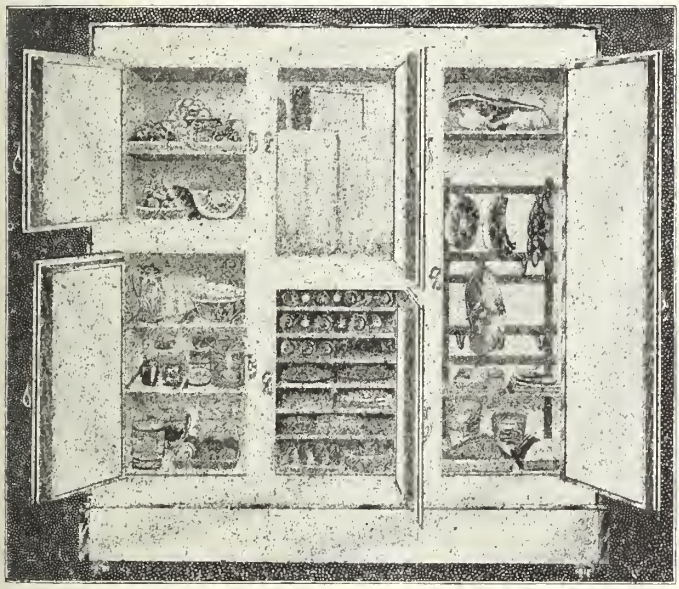
increase in sales over that of the corresponding months of last year. In fact, it is the growth of the business which necessitated the removal into larger quarters, where the company has 75 per cent more space than in its old plant. The steadily growing esteem in which The Antikamnia Chemical Company's products are held by the medical profession throughout the world is due to the well known merits of the original Antikamnia Tablets and Powder, as well as to the undoubted remedial efficacy of therapeutical excellence of the new combination tablets which this company has from time to time added to its line of specialties.

MEDDLESOME MIDWIFERY is responsible for many of the complications distressing and dangerous to the parturient woman, but one of the objectionable forms of meddlesomeness is the premature vaginal douching. Unless the cavity of the uterus has been invaded by the hands or instruments (and it is exceptional for such invasion to be needful) nature is the best sterilizer, and the blood in which the wounded womb and all the parts are bathed is the best protector against infection. After a week or ten days have passed, skilful and careful vaginal douching with hot water and Tyree's Antiseptic Powder, a teaspoonful of the latter to the pint of water, will be most helpful in the securing of rapid healing involution and a toned-up condition of all the mucous membranes. Of course, if any symptom immediately following confinement points to a possible septic involvement, prompt dislodgment of suppurating accumulations and thorough cleansing is demanded, and Tyree's Antiseptic Powder comes in well.

DANIEL'S Conct. Tincture Passiflora Incarnata is used with splendid results in cases of neurasthenia. It relieves dizziness and is free from the intoxicating effects that follow the use of many so-called

Opal Refrigerators

Snow white inside and out (like illustration), or **Oak Case with Opal Lining.**



The only sanitary refrigerators. Non-porous as glass, cannot absorb moisture nor odor.

Cleaned like a china dish, every point penetrable by soap and water, round corners, no cracks nor crevices to retain food particles or moisture—no outside glaze surface or soft clay body to crackle, craze and soak water as does porcelain tile.

Opal is a solid Enamel made in large sheets. Possesses a snow white, beautifully lustrous, hard, smooth surface, impervious to moisture or odor. Stone cold always, it gives perfect storage with the least possible ice.

Cold dry air circulation produces the lowest degree of temperature of any refrigerator made.

4-inch outside walls—formed of six non-conducting materials affords perfect insulation.

Solid brass, heavily nickeled trimmings make it impossible for Opal refrigerators to ever rust or corrode.

Special sizes built to order to fit any space desired. Your dealer sells Opal refrigerators or can order one for you. If not, order direct from our factory.

The most up-to-date, complete and satisfactory refrigerators made for Private Homes, Dealers, Professional Men, Hotels, Clubs, and Institutions.

Write for large illustrated catalogue, sample piece of Opal Enamel, prices and estimates, Free.

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calmative remedies. In hysteria two doses usually control the patient. In nervous irritability arising from uterine trouble its action is prompt and certain. Daniel's Passiflora is the proper remedy to employ in la grippe, headache, and wherever it is desired to normalize the nerves.

In Their New Home.—The Eastern Office of The Abbott Alkaloidal Co. is now located at 50 West Broadway, New York, formerly 93 Broad Street. Their eastern business has increased so rapidly within the last year, under the management of Mr. N. B. Harris, that large and more commodious quarters were necessary. Friends will receive a hearty reception from Mr. Harris at any time in the new home.

Aletris Cordial Rio is an emmenagogue, not abortifacient. It cures congestion of the uterus and ovaries, and favors the occurrence of the menstrual discharge. It is also especially appropriate when the amenorrhea depends upon anemia. It regulates menstruation, and is useful in all the derangements of menstruation, namely, amenorrhea, dysmenorrhea, and metrorrhagia, provided these disturbances be idiopathic. By curing menstrual disease, a common cause of sterility, it will also cure the sterility. It is also recommended in erosions of the cervix and vulvar eczema.

Sanmetto in Urethritis and Enuresis.—Having had elegant results from the use of Sanmetto in genito-urinary diseases for quite a time, I am more fully convinced of its curative properties since having had a boy, aged twelve, call at my office, who had been suffering from an obstinate case of urethritis with enuresis. He stated that he had consulted two or three doctors, with no relief, and if he could be cured, cure him, and if not, not to

IN that severe case of periodical back-ache, you will find nothing which will give your patient greater relief or yourself more satisfaction than the prompt application of a

BELL-CAP-SIC PLASTER

over the lumbar regions.

We would be pleased to send you a sample with which to make a test.

Indicated external medication can nearly always be met with a BELL-CAP-SIC PLASTER

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BOSTON, MASS.

give him anything. So I put him on the following:

Oil Santali 3ij
Sanmetto, q. s.....3iv.

Sig.: 3j every four hours.

With rest in bed and proper diet. In ten days he was well and had no symptoms of either of the above troubles. Henceforth I shall know where to get a specific for such cases. I have always had good results from Sanmetto.—WYATT C. HATCHER, M.D., Brunswick, Ga.

WE direct the attention of our readers to the advantages of Dr. Pettey's Sanitarium at Memphis, Tenn., for the treatment of alcoholic and drug addictions.

A thoroughly equipped and well regulated private sanitarium is the only place where the treatment of alcoholic and drug addictions can be carried out to advantage, therefore no patient is desired for treatment outside of the sanitarium. No medicine will be sent for home treatment.

Time Required.—The time usually required to effect a cure of either the liquor or tobacco addiction is one week, and patients can safely return home at the end of that time.

The treatment of drug addiction is completed within one week so far as therapeutical measures are concerned, but, while drug patients very rarely take medicine of any kind after the first week, they are not in a condition to safely return home that early. The habitual use of morphine and other narcotic drugs induces such a state of mental and physical unhealth that considerable time is required for those recently freed from their thraldom to regain health. This period of convalescence should be spent at the sanitarium. Here they are under such supervision and restraint and are given such encouragement as seems indicated in each case. If any slight ailment occurs it is given prompt attention, thus protecting them from suf-

SOUND SLEEP

PATIENTS REQUIRE REFRESHING SLUMBER. WITHOUT IT THE NERVES BECOME UNSTRUNG, THE TEMPER IRRITABLE, AND RESULTANT CONSEQUENCES AFFECT EVERY ORGAN OF THE BODY. THE PHYSICIAN KNOWS ITS IMPERATIVE NECESSITY, AND MUST PRODUCE IT NATURALLY OR ARTIFICIALLY. **DANIEL'S CONT. TINCT. PASSIFLORA INCARNATA** BRINGS RESTFUL SLEEP AND LEAVES THE PATIENT IN A CHEERFUL, INVIGORATED FRAME OF MIND, BECAUSE IT IS NATURE'S NERVE FOOD, BEARING VITALITY AND HEALTH TO LANGUISHING NERVE CENTERS.

A SAMPLE WILL BE SENT TO ANY DOCTOR WILLING TO PAY EXPRESS CHARGES . . .

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SANMETTO FOR GENITO-URINARY DISEASES.

A Scientific Blending of True Santal and Saw Palmetto in a Pleasant Aromatic Vehicle.

A Vitalizing Tonic to the Reproductive System.

SPECIALLY VALUABLE IN
PROSTATIC TROUBLES OF OLD MEN—IRRITABLE BLADDER—
CYSTITIS—URETHRITIS—PRE-SENILITY.

DOSE:—One Teaspoonful Four Times a Day.

OD CHEM. CO., NEW YORK.

fering during the time their powers of resistance are below par and avoiding danger of relapse. Drug patients should remain at the sanitarium from two to four weeks.

I HAVE weighed Peacock's Bromides in the balance and not found it wanting as a most efficient remedy for the prompt relief of all nervous excitement, epilepsy, uterine and cerebral congestion, hysteria, neurasthenia, and, in fact, any convulsive or reflex neurotic derangement. It can be depended upon always. — ALFRED R. SCHOENIG, M.D., Billings, Mo.

"SUPERIOR TO FORGETFULNESS."—The physician who constantly uses Merck's Manual is never at a loss for the name of the right drug, the right combination, and at the right time. This little pocket reference book recalls forgotten therapeutic facts and thereby renders the user superior to forgetfulness. The Manual is an alphabetic materia medica and therapeutics, a complete prescription formulary, a guide to the latest treatment of poison cases, and contains much other information of constant interest to the physician.

DR. BROUGHTON'S SANITARIUM AT ROCKFORD, ILL.—The tourist who views with discriminating criticism the villages, towns, and cities which dot the landscape from the Atlantic to the Northwest is very prone to find fault with the artistic surroundings of many a thriving Western town. There are, however, occasional exceptions, and notable among them is Rockford, Ill.—one of the ideal spots of the Central West.

Gratifying as it is to the eye, Rockford has the additional great advantage of accessibility. Four great railroad lines pass through the city, which is ninety-two miles from Chicago; and within convenient reach of all railroad stations is located the

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Send for price list.

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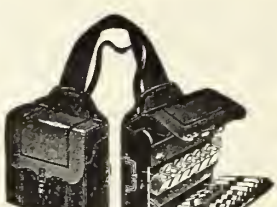

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RECENT DISCOVERIES HAVE MADE THE

MORPHINE ADDICTION

the most certainly and readily curable of all the chronic ailments. Reprints fully sustaining this claim on application.

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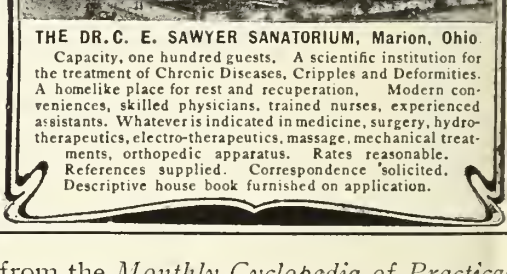
PRACTICE LIMITED TO TREATMENT OF

ALCOHOL AND DRUG ADDICTIONS.



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Capacity, one hundred guests. A scientific institution for the treatment of Chronic Diseases, Cripples and Deformities. A homelike place for rest and recuperation. Modern conveniences, skilled physicians, trained nurses, experienced assistants. Whatever is indicated in medicine, surgery, hydrotherapeutics, electro-therapeutics, massage, mechanical treatments, orthopedic apparatus. Rates reasonable. References supplied. Correspondence solicited. Descriptive house book furnished on application.

Broughton Sanitarium for treatment of drug and alcoholic habits, as well as nervous cases in general.

In the city of Rockford forestry has been carried out to an admirable extent, but the people of that city point with special pride to the magnificent grounds surrounding the Rockford Sanitarium, containing twelve acres, beautifully laid out in lawns and walks with thirty different varieties of shade trees. The Sanitarium building, commodious and newly fitted out in luxurious style, is thoroughly modern in every respect and built on a plan which makes every room a desirable one. This institution is therefore peculiarly fortunate in affording in agreeable form one of the most necessary adjuncts of the successful sanitarium—environment. Physicians who may desire to send patients to the Broughton Sanitarium may also rest assured that they will have every professional advantage attainable through wide experience and medical skill.—Reprint from the *Monthly Cyclopedia of Practical Medicine*, December, 1902.

THE Opal Refrigerator, an illustration and announcement of which appear on page 25 of our advertising section, ought strongly to appeal to medical men. From the standpoint of sanitation it cannot be too strongly commended. The interior of this refrigerator is a snow-white, solid enamel, hard, smooth, lustrous, and impervious to both moisture and odor. It has no cracks or crevices for the retention of food particles, and is as easily cleansed as a china dish. The ordinary zinc-lined refrigerator, as everybody knows, is apt to be unwholesome. It is susceptible to rust and corrosion, and is probably a prolific source of bacterial growth. We believe that our medical friends will do well to inform themselves as to the good points of the Opal, whether with a view to its adoption in their own homes or to its recommendation to their friends or patients, and to that end we suggest the

In Gout and Rheumatism and in all conditions where excessive production or imperfect elimination of uric acid plays a part, **Hunyadi Janos** is a superior remedy which may be used freely, without fear of doing harm.

Hunyadi János THE BEST NATURAL APERIENT WATER

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SPECIAL NERVOUS DISEASES

A QUIET, DELIGHTFUL HOME, UNDER THE PERSONAL CARE AND DIRECTION OF

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THE DOCTOR'S FRIEND.

IT WILL STAY ALIGHT IN SPITE OF WIND OR JAR.

With this lamp night driving is safe and a pleasure.

Send us $3.75 (mention this paper) and we will send you a handsome japanned lamp, expressage paid in U. S. or Canada, and will guarantee it to give entire satisfaction.

You can return the lamp at any time within 30 days of purchase if you are not satisfied and get your money back without delay or trouble. Send for book.

We also make GUARANTEED Automobile Lamps.

R. E. DIETZ COMPANY, 21 Laight St., New York.

ESTABLISHED 1840.

propriety of writing the manufacturers, the Eureka Refrigerator Company, 3800 Nowland Ave., Indianapolis, Ind., for their illustrated catalogue, which is mailed free, and which affords full information as to styles, prices, etc.

FOR CHILDREN during the transitional stage when passing from a purely infant's diet to more substantial nutriment, but not as a substitute for Mellin's Food for infants, Mellin's Food Biscuits should be employed in preference to any other kind of biscuit until the digestive organs are strong enough to make use of the ordinary farinaceous foods.

For children going to school who need a little lunch at recess.

In the home, for the little one who wants "something to eat" between meals.

For "the baby" who is beginning on a general diet.

For convalescents when suffering from the effects of malnutrition, as a means of supplying, in an available form, concentrated nutritive material, they may with advantage be made to alternate with other solid foods.

ACTION OF THIOCOL IN PHTHISIS.—In paroxysmal dyspnea of phthisis, and to relieve the diarrhea and sweats, Thiocol is eminently satisfactory. Two great points in its favor are: Perfect freedom from causing derangement of the stomach, and the ease with which it can be carried about. I am thoroughly convinced that any physician who will give Thiocol a fair trial will have the same satisfactory results that I have had in forty-seven cases of phthisis. In this disease the administration of Thiocol—a 5-grain tablet three times daily—surpasses all other methods of treatment that I have tried during the thirty years I have been in practice.—D. WAGNER, M.D., Springfield, Mass., in *Merck's Archives.*

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FOR SALE.—Medical practice and stock of drugs, in village of 350 people, northern Illinois. No opposition. No drug store. Reason have extra drug stock and fixtures. Doing $3000 business $1000 takes it. Do not answer unless you mean business. Address Doctor, Box 48, Mokena, Ill. 8

WANTED.—A physician to locate in a hustling little town of 400 in the State of Minnesota. One good drug store. Splendid opening for a good man. Address Pharmacist, care MEDICAL AGE. 6

FOR SALE.—$2000 medical practice in place of 3000 population, with or without property, or will exchange for good location. Address Doctor G., Janesville, Mich. 25

DOCTOR WANTED.—Chance of a lifetime. Kansas town of 700; large, thickly settled territory; practice $2500; only one other doctor. Will sell a two-room office furniture for $150. Must return East. Write quick. All letters addressed to M D., Box 210, Plainville, Kas. 19

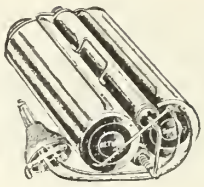
FOR SALE.—Unopposed practice, established 20 years, in a beautiful village in northwest Ohio. Fine farming country, good roads, collections exceptionally good. Churches, schools, and social community German and English. Going to city. Don't write unless you mean business. Address S. H. Sibert, M.D., Box 4, Fryburg, Ohio. 18

FOR SALE OR RENT.—Physician's residence with modern improvements, situated in the beautiful Holmdel Valley. No opposition. Good paying practice, $1800 a year. Reasons for selling given upon application. Address Dr. Fred V. Thompson, Holmdel, Monmouth Co., N. J. 18

FOR SALE.—A good paying practice of seven years, in a town of about 800, in N. W. Iowa; good roads; good farming country; an up-to-date community, and very good pay. One other physician. Will sell for price of property, including home, office and barn, with all necessary fixtures. Best reasons for selling, will state to inquiring ones. Address C. M. McCaughan, Quenemo, Kansas. 15

WANTED. — Second hand surgical instruments and operating room supplies. Cleveland table preferred. All must be in good condition. Address "Surgical," care Journal.

WANTED. — A Canadian practitioner, single, with some means, licensed in New York State, desires responsible position in city private hospital, or to purchase the practice without property of retiring busy city physician. Address T. P. A., Medical Age.



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Surgical Pump and Aspirator

Operated with compressed air and VACUUM Suction.

Consists of two nickel cylinders, with air pumps between to create compressed air in one cylinder and vacuum suction in the other. Opeo valve and compressed air forces liquid from one cylinder in six forceful streams through end of nozzle. The vacuum sucks it back at center of nozzle to other cylinder. Will inject and withdraw a quart douche in half a minute and without a drop of leakage. No need of a rubber blanket, bed-pan or other protective device. This is the **only effective syringe**—the only one a physician will use when he knows its value. There is nothing to compare with it. A very important adjunct to successful gynecology. Seod for booklet, and special price to physicians.

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Tyree's Improved Litmus Pencil is always reliable. Will detect one part in a hundred thousand. Carry Tyree's Pencil in your pocket, and you can make at all times a piece of the best litmus paper at a moment's notice. Price, 25c. by mail.

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REACTIONS

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ORIGINAL CONTRIBUTIONS.

A PRELIMINARY REPORT ON THE TREATMENT OF TABES WITH THE X-RAY.*

BY JOHN W. DANIEL, M.D., SAVANNAH, GA.

Mr. President and Gentlemen—In presenting this paper I wish to emphasize the point that this is a preliminary report, and I might add with provisional improvements. I do this advisedly, knowing the gravity of the disease under discussion and the hopelessness of treatment. In undertaking this treatment I have ignored the supposed causative agent in the majority of cases, and have looked to the pathological condition, applying the remedy there, hoping through the unknown metabolic changes which the *x*-ray brings about in other diseased conditions of the body to accomplish something in this special disorder. I cannot as yet say anything positive as to the ultimate outcome of the experiment, but the results so far have been very encouraging. The results cannot be mere coincidents, for the two cases under treatment were in different stages of the disease; but both cases responded similarly, in that the last symptoms to develop were the first functions to be restored.

I will not enter at all into the discussion of the pathology of the disease, for it would be a mere repetition of some text-book, nor will I theorize as to how the improved conditions are brought about, but will confine my paper to the clinical results as they have manifested themselves.

At present I have no fixed method of treatment beyond the simple application of the ray, nor any limit of time for repetition of exposures, no definite length of exposure. The only thing to be governed by is the way the patient responds, and avoidance of burns. In my opinion the early diagnosis of tabes, with the

*Read before the Georgia State Medical Association, Columbus, Ga., April, 1903.

application of the *x*-ray, offers great hopes for an arrest of the disease. In well developed cases the ray will improve the condition and probably restore the lost functions.

I am taking this opportunity to call the attention of the profession to the possibilities of this method of treatment, with the hope that by the persistent and early application of the remedy we can arrest the disease if nothing more is accomplished. And by the united efforts of those interested in the treatment we can probably arrive at something definite as to what can be accomplished.

In presenting the clinical report of the cases treated, I will not word the report to suit myself, but have the report of each patient as prepared by himself. Both patients being men of more than ordinary intelligence, and having consulted the best authorities in America, are thoroughly familiar with their conditions and symptoms, and are in a position to write a thorough history of their respective cases, with changes in their condition as they arise.

Case 1.—Male, aged forty-two. Duration of disease seven years. No history of syphilis.

At the time I began treatment for locomotor ataxia, June 1, 1902, under Dr. J. W. Daniel, I could walk with great difficulty with the aid of my stick, and became greatly fatigued after walking two or three blocks. My gait was jerky, unsteady, and very uncertain, and I could stand up only a short time, being exceedingly weak in the legs. In shaving I used a safety razor, and in a sitting posture. My weight was 144 pounds, and I used my buggy almost exclusively in getting around the city.

At present writing I weigh 158 pounds; my gait is almost normal, being firm and steady. I walk anywhere without the aid of my stick, and quite recently I walked four miles with no apparent fatigue. For the past three months I have stood while shaving and used an ordinary razor. My bladder, which had given me much annoyance from a failure to control it, is almost normal and troubles me very little, if any. My arms, which became numb frequently at night, have become normal. My eyes have improved to the extent that I have dispensed with my reading glasses; I notice no impairment of my vision, which commenced to fail very perceptibly. My throat troubled me constantly. I was subject to paroxysms of coughing, making it almost impossible to converse any length of time. I am now seldom troubled in this particular, and notice decided improvement. My sexual organs have also shown the general benefit derived under the treatment, and I seem more vigorous. My

nerve pains have seemed less frequent and not as severe, and are easily controlled. I sleep well, have a good appetite, and my improved appearance has been generally noticed by my friends and considered wonderful.

Case 2.—Male, aged forty-five. No syphilis. Duration of disease twelve years.

Comparative statement as to condition at time of commencement of treatment with *x*-ray, July 1, 1902, to February 15, 1903.

The Spine.—On July 1, 1902, there was but little sensation to touch. There has always been quick response to heat and cold. A mustard plaster applied to spine from the first dorsal to coccyx would have but little effect. There would be sensation of burn in only two or three small spots, and then not until after the application had been made for a considerable time. The entire length of the spine on either side of the column, for about two inches in width, seemed to be dead, and the muscles were hardening.

At this time the entire length of the spine is sensitive to the touch; though not as acute as normal, it is greatly improved. A mustard plaster will burn the entire length quickly after application. The flesh has softened on either side of the column and now feels about normal.

The Legs.—I found it very difficult to walk, stumbling, and scarcely able to keep my equilibrium. I had to keep my eyes for the most part upon the ground immediately in front of me, and when in a crowd or in a confined space I found it almost impossible to proceed. There was a dead feeling above and below the knee. I suffered occasional pains in the extremities. I had to move my feet rapidly in order to keep erect. Now I find it easy to walk. My gait is not normal, but the improvement has been so marvelous as to prompt frequent congratulations from my friends. I can look forward and do not have to keep my eyes upon the ground, except in crowded places. The numbness has not altogether left my legs, although there is more freedom of action and no inconvenience. While I cannot yet run, I can skip. I need not walk so rapidly to maintain equilibrium. I can walk slowly, using either long or short strides. I can stand still with much less difficulty, though there remains a rocking motion. I can walk a considerable distance or stand for hours without great inconvenience. My pains are more frequent and of greater intensity, and for the most part are confined to and below the knees in both legs.

The Hands.—My left hand was of little use; I could not depend upon its grasp. The third and fourth fingers had very

little sensation of touch and were always in the way. There was occasional pain along the ulna. My right hand has not been as much affected, though the third and fourth fingers have not been normal. I could not write sentences, and at times could not write my name. My grasp was very weak and unreliable.

I can now use my left hand; its grasp has improved, and while not up to normal, is sufficient to be of assistance. There is an improved condition as to sense of touch in third and fourth fingers, and these do not get in the way so much. There is more frequent pain in the ulna. I can write more readily; while I cannot yet tabulate figures, I can make all of the numbers—the 8 and 3 give me most concern. I can place figures in a column, but cannot use ruled spaces. There seems to be some obstruction in the way of confining myself to a given space or line. I can use the typewriter, using both hands alternately; my speed is not what it was formerly, but is much more rapid than that of an ordinary penman. My arms have given me but little trouble, only an occasional pain along the ulna.

The Eyes.—I have ophthalmoplegia. I could hardly move either eye upward or downward, and not at all to the right or left. The muscles of accommodation for the lenses seemed to act very slowly. The optic nerve of the right eye is atrophied.

I find I can now move the eyes upward and slightly downward, but as yet cannot move them to the right or left. The muscles of accommodation for the lenses act more promptly. At times I think I can discern more light around the edges of the optic nerve of the right eye.

Sphincter of Bladder.—I could not control my bladder in the day or night-time. The sight or sound of running water or escaping steam was sure to cause a wetting. I could not retain the urine until I could reach a convenient place. There was bed-wetting every night, and often two and three times during the night. I would not wake until after the trouble had passed.

I now find scarcely any difficulty in controlling the bladder during the daytime. Running water and escaping steam bring about a desire, but I can control it until a place of safety is reached. At night I rarely wet the bed, and then only when I fail to get up after waking. I wake in time, and if not too sleepy would find no inconvenience on this score. The fault now is mine and not the disease.

Sphincter Ani.—This was a serious affliction. For years I had been ostracized from society because of incontinence of the gases. These would escape in no uncertain tones whenever I was placed in a position where such an act would be disgraceful.

There was nothing to be done in the exercise of the will, and artificial means had to be employed—first an enema of warm water to clear the rectum, and then an enema of strong alum water to hold the sphincter for a while. At times there would be discharge of feces, but this did not occur often.

I find now that there is very little trouble from the sphincter. At times when in company I feel nervous and fear a mishap, but this is due more to dread than to disease. I believe there has been a complete change in this place.

Sexual Organs.—These have been practically dead for several years. The *x*-ray has so far done nothing for them.

In conclusion I wish to impress on this convention that this report is on experimental work only, and is not to be taken as a positive statement that the *x*-ray will cure tabes, but in the limited time that the work has been carried on the results will warrant a continuance of the research.

During the course of treatment the patients have had their backsets as in other diseases of equal seriousness, but each time they rally, and the sum total of the rises and depressions is that the patients are better than under any other method of treatment.

102 Henry Street East.

HEPATIC TUMORS AND HEPAPTOSIA, WITH ITS TREATMENT.

BY BYRON ROBINSON, B.S., M.D., CHICAGO.

An astute Englishman—Bishop Butler—is given the credit of being the author of the remarkable maxim that "Probability is the rule of life." During the past dozen years of special labor in abdominal and pelvic surgery I have frequently tested myself in diagnosis by careful examination previous to the abdominal section to see with what exactness my clinical diagnosis agreed with the abdominal inspection. In the proximal abdominal cavity my diagnosis was accompanied by numerous errors. In the pelvic cavity, where my experience was greater, the diagnosis was accompanied with comparatively less errors owing to more perfect palpation. It may be frankly stated that an abdominal section is an experiment to determine the pathologic condition. However, the good old maxim "Probability is the rule of life" has well served me for a decade, and it is also an excellent rule to announce to general practitioners in the postgraduate school.

Perhaps nowhere is the maxim "Probability is the rule of life" more applicable than in tumor of the liver and in hepaptosia, which frequently simulates hepatic tumors. If I had any conceit in regard to being able to diagnose hepatic tumors, it was long ago expelled forever. In a case in relation with the late Professor Fenger, whose analytic powers of diagnosis were unrivaled, the subject was a woman with quite spare, relaxed abdominal walls. The tumor could be quite well palpated and moved with the liver. It was what I supposed exactly in the region of the gall-

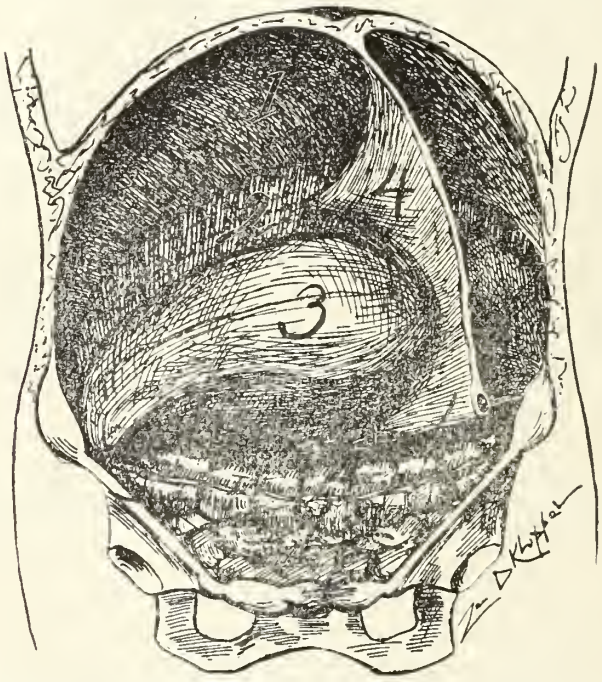

FIG. 1.—Hepaptosia. 1, Diaphragm; 2, coronary ligaments; 3, right lobe of liver; 4, ligamentum suspensorium hepatis; 5, transverse colon forced distalward by the wandering hepaptotic liver; 6, loops of enteron forced into the lesser pelvis. This stage of hepatosia is frequent in splanchnoptotic women.

bladder. My diagnosis was gall-bladder; but Professor Fenger said before the patient was anesthetized that it felt like a gall-bladder, but he had some doubt. After the patient was anesthetized Professor Fenger again carefully examined the case for thirty minutes and said: "I cannot make an exact diagnosis, but I do not now think it is a gall-bladder, though it has the shape, size, and location of a gall-bladder." Operation proved that it was a hepatic tumor located immediately adjacent to the gall-bladder, having almost the exact size, shape, and location

of distended gall-bladder. It was a secondary malignant hepatic tumor. Reliable powers to diagnose pathologic enlargements connected with the liver are acquired very slowly, and can best be aided by post-mortem inspection.

In post-mortem work the liver is the stumbling-block, like Alexander's operation in gynecology, to beginners. I well remember a case sent to me by Dr. Geo. Rock, of Indiana. The patient had an enlargement of the right lobe of the liver which extended distalward in the right iliac fossa and lesser pelvis. The patient had been ill about eighteen months. She had an irregular

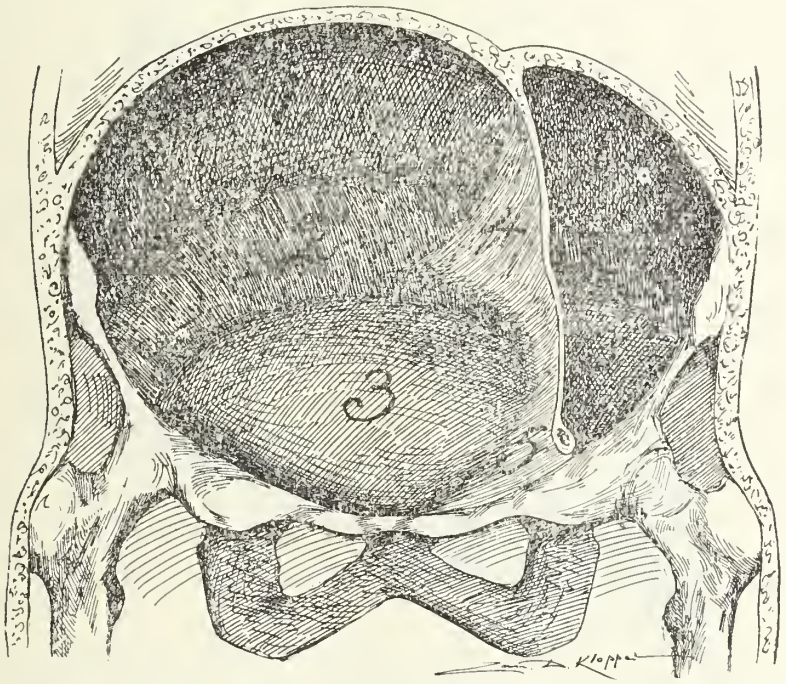

FIG. 2.—Advanced hepaptosia, in which the liver rests in the proximal opening of the lesser pelvis. The corouary ligameuts are elongated as well as the ligamentum suspensorium hepatis and rotundum. 1, 1, Diaphragm; 2, 2, right and left coronary ligaments; 3, 3, right and left liver lobes; 4, suspensory ligament of liver; 5, ligamentum rotundum hepatis. The liver in this stage of hepaptosia obscures practically all abdominal viscera. (This illustration was sketched from a subject in my practice.)

hiccough. I could not diagnose the case, and so told the patient's friends. I suspicioned a malignancy to such an extent that I would promise little with an exploratory incision. The relative in charge was curiously enough anxious for an exploration, for he observed that it looked as if she would soon die unless relieved. An exploration lasting but a few minutes revealed only

an enormously enlarged right liver lobe. The left liver lobe was so small that it was attached to the right like an ear on a man's head. The right hepatic lobe projected into the pelvis. Macroscopically I could find nothing pathologic with the liver or any other abdominal viscera. She died before the month was out—of what I do not know. No autopsy was allowed.

Hepaptosia or wandering liver is met with in varying degrees, especially in woman. When one studies splanchnoptosia for ten years in the living, and supplements it by several hundred autopsic abdominal inspections, he will be surprised how frequently the

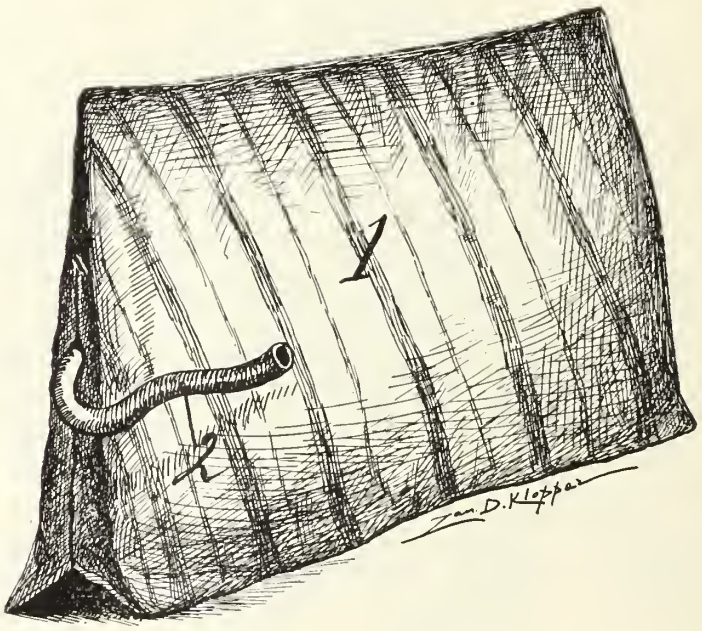

FIG. 3.—Author's rubber air-pad for splanchnoptosia half distended; it is to be placed inside an abdominal supporter. 1, Side of rubber pad; 2, the rubber tube through which the rubber pad can be distended with air. (This rubber air-pad is manufactured by John Drake & Co., of Chicago.)

liver is found with excessive mobility—hepaptosia. According to my studies splanchnoptosia is due: (1) to relaxed abdominal walls; (2) to consequent distalward movements of the viscera; (3) to the compromising of the segments of one visceral tract by those of others, as flexion, compression, traction; (4) to the trauma of the thoracic diaphragm.

In hepaptosia I have examined the liver assuming positions as far distalward as the lesser pelvis. In one living case, a woman about thirty-six years old, last child eight months old, I could

palpate the liver per vaginam. The liver could be forced to almost any portion of the abdomen. She was very spare, emaciated; the abdominal wall was atrophic, and extreme diastasis of the musculi recti abdominales existed. The major hepatic supports—viz., (*a*) the vena cava distal; (*b*) the hepatic ligaments; (*c*) the abdominal wall—were all relaxed. The supporting fibers were elongated and separated; the adjacent viscera, which give such efficient support to the liver, had passed distalward. The liver, as far as palpation could detect, was negative in shape, size, and weight. Now, unless the physician keeps his head and does

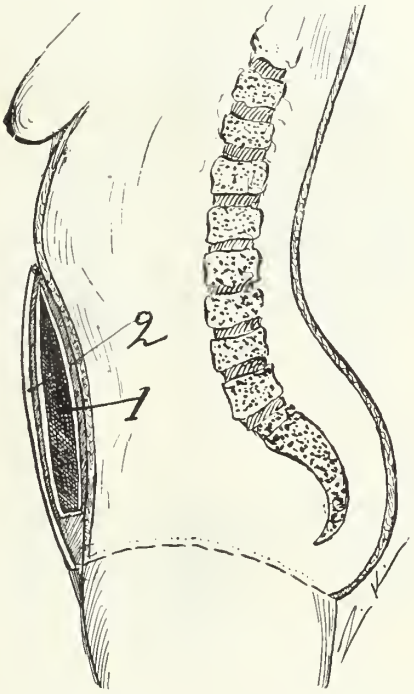

FIG. 4.—Profile view to illustrate the pressure of the rubber air-pad on the abdomen. 1, Distended rubber pad; 2, wall of abdominal supporter pneumatic rubber pad.

some generalization he will assume that it is hepatosia alone that is making the patient ill. It is not the wandering liver that causes all the trouble; it is the general splanchnoptosia. Every abdominal visceral tract—tractus intestinalis, genitalis, urinarius, lymphaticus, vascularis, and nervosa—suffers in splanchnoptosia. The liver ptosis is but a part and parcel of the general disease—splanchnoptosia. All visceral canalization is compromised by flexion, traction, and compression, while the tractus nervosa is traumatized.

What shall be done with patients suffering from hepaptosia? Much aid and comfort can be given such persons by patient treatment.

1. *Visceral Drainage.*—The most rational treatment of splanchnoptotics is visceral drainage. Administer 8 ounces of hot half-normal solution every two hours with some mild cathartic —*e.g.*, 3 grains of $Mg.SO_4$. Order a light diet: little meats; ample vegetables, which leave an intestinal residue to stimulate

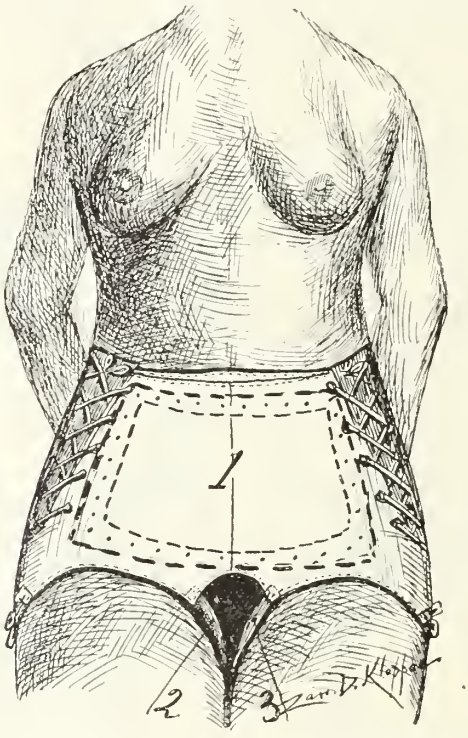

FIG. 5.—The pneumatic rubber pad is fitted to the abdomen inside the abdominal supporter; 2 and 3 are rubber tubes passing between the limbs to fix the abdominal supporter. It requires several days, a week, for patients to become adjusted to the pad. Patience on the part of the patient and encouragement on the part of the physician will soon adjust the use of the pad.

the muscles of the tractus intestinalis; ample cereals, especially Graham bread. The drainage relieves congestion, equalizes circulation, eliminates waste-laden blood, induces sleep, and adds comfort.

2. *Massage.*—The muscles of the abdomen should be strengthened by constant use, active and passive, so that they will support the liver.

3. *Assumption of the Horizontal Position.*—It is a great aid

to the hepatotic to lie reclined or horizontal frequently during the day. Repeated lying down equalizes the circulation. He should retire early and rise late.

4. *An Abdominal Support with a Pneumatic Rubber Pad.*—I have invented and employed such a support for years with great satisfaction. The support and pad are removed at night. The rubber pad can be inflated to the comfort of the patient. The liver in its lesser degrees of dislocation is easily forced in position.

5. *Overlapping of the fascio-abdominal apparatus,* like a double-breasted coat, is the most satisfactory of all operations. The musculofascial apparatus should be retained *in situ* by silver wires. The fixation of single organs, as nephropexy, hepatopexy, hysteropexy, is unphysiologic and irrational. Hepaptosia, nephroptosia, or genital ptosia is part and parcel of a general disease—splanchnoptosia. The operation for liver fixation—hepatopexy—advocated by Dr. Jones, of Omaha, is applicable in relatively few cases, and besides, unless accompanied by overlapping of the fasciomuscular abdominal apparatus it can be of little use.

SOME PRACTICAL THOUGHTS UPON INSANITY.*

BY CHAS. W. HITCHCOCK, M.D., DETROIT, MICH.

It is well, I think, to preface these remarks on insanity with the positive assumption that all mental activity is neural activity. This assumption will be generally granted, and will be doubted in but few quarters. It is practically the basis of all intelligent and advanced study of mental disease to-day, and is the foundation upon which rests the rational treatment of mental disease.

We are, I fear, too prone to think of the mind as something apart from the physical, to disregard the closeness of relation—in fact the practical unity of the mental with the physical; we too easily forget that the mental is the neural, and that early physical derangement of one sort or another almost invariably precedes any deviation from mental health.

The subject before us is a large one, and in order to confine these remarks within reasonable bounds I wish here to refer only to some points as to the early recognition of insanity, some items as to differential diagnosis; and lastly, to discuss briefly a few points as to the rational treatment of the patient.

I can of course refer here only to a few of the more commonly

*Read before the Detroit Academy of Medicine.

encountered mental conditions, and shall confine myself to general paresis, neurasthenia, hysteria, and the delirium following acute febrile conditions.

It is of especial importance that general paresis be early recognized, and this is true with reference to the rational prognosis, the patient's personal interest, and the interest of friends and family, in order that early care may prevent the too common encumbering or dissipation of property. It is worth while to note that the very early stages of the development of this disease before the disease is well established—what we may call the prodromata of paresis—are to be noted only by getting at and considering intelligently the recent history of the case in question.

The patient himself often early appreciates that he is in an abnormal mental condition, that something has come over him which makes his consecutive work and long application difficult.

Paretics have repeatedly given expression to this early suspicion of some mental involvement; indeed, I believe that in one case a physician diagnosed his own case in the prodromal stage. He, however, soon loses all memory of his fears, and all consequent depression from his own diagnosis, and it is usually the fact that admitted suspicions of mental impairment will shortly be denied even in the face of pronounced physical advances of the disease—all consciousness of the abnormal and all fear of disease are entirely lost in the abnormal sense of well-being, which grows with the advance of the disease. There is noted by the patient's friends and family a change in disposition and character. The hitherto upright man may become low and vulgar, and seek associates who once would have been repulsive to him. The diligent man may lose interest in and neglect his own affairs, or his judgment may suddenly be found bad. There is little power of application or fixity of purpose; he is easily fatigued, there is loss of memory, inclination to disregard the personal rights of others, his own duties, and the courtesies commonly due in the usual course of life. Ataxic speech is often very early apparent.

Small crimes may follow, such as objectless thefts, purposeless lies and frauds; and these crimes have many times been punished, there having been no adequate apprehension of the diseased mental state to which they were due. He becomes irritable and emotional, and there may be seizures of epileptoid character. The various pupilary changes may or may not be detected in the prodromal state.

When, however, the disease is once established, the patient presents a more pronounced picture. He is apt to be over-

confident, intensely busy, magnifying trifles, egotistical, confiding to almost strangers personal matters, restless, loquacious, unappreciative of facts, and his memory especially impaired as to matters of recent occurence. The handwriting as well as speech may be early affected and show a marked ataxia. It is well to be on one's guard that the ataxia is not that sometimes present after a prolonged alcoholic indulgence. This point would of course clear up on the withdrawal of the alcohol supply and appropriate tonic treatment for a few days. A feeling of intense well-being dominates him almost constantly. He may entertain delusions of great wealth, and his intensely active brain gives rise to many a grandiose scheme. In this stage there is very apt to be seen some pupilary irregularity—either the pupils may equally contract, or there is marked inequality, and the reflex in the earliest stages is apt to be quickened, the second condition (viz., inequality) probably being more common. It should not, of course, be forgotten that occasional cases of paresis exhibit, instead of the elation and well-being, a distinct depression, which in some cases is very deep and persistent.

Neurasthenia usually presents a different picture. The condition is one of brain fag, and the evidences of this usually precede any evidences of mental disturbance. While the paretic will seldom of his own volition seek medical aid for his troubles, the neurasthenic not infrequently seeks the help of his physician in what he is sure, however, is a hopeless treatment of his many ills. The paretic has no long tale of woe to relate; the neurasthenic, however, relates in detail ills and aches which are legion in number.

The neurasthenic patient is greatly inclined to worry over trifles, magnifying them out of all proportions. There is present great irritability and lack of poise and self-control. While the paretic patient frequently exhibits no subjective sense of fatigue even after great activity, the neurasthenic patient is apt to be surprised at his abnormal sense of fatigue even after comparatively slight or usual activity.

In neurasthenia there is frequently a moderate dilatation of the pupils, but the reflex is normal; while in paresis there is usually some marked pupilary abnormality, and the reflex is apt to be slow when the disease is well established.

As to age, if before the thirty-fifth year without a history of any specific infection and the breakdown is sudden, the case is more apt to be one of cerebrasthenia rather than paresis. The mean average age of paresis is found to be about forty-one.

As to the mental condition in the neurasthenic, the failure of

memory is subjective rather than objective. Both are subject to egotism, irritability, and emotional states, but the neurasthenic patient fails to exhibit the ambitious delusions of the paretic, and the ethical side of his nature remains unchanged. His intelligence, too, is not disturbed, while the intelligence of the paretic is apt to be in a very much jumbled condition.

These distinctions are worth noting because the two conditions have been confounded, and the breakdown of early paresis has been dignified with the diagnosis of neurasthenia, and so treated—not at all to the welfare of the patient and his friends.

I do not by any means desire to convey the impression that all subjects of neurasthenia are to be considered as just as distinctly exhibiting phases of mental disease as the patient breaking down with general paresis. By far the larger number of neurasthenics fail to cross the line into the realm of the psychoses. The extent of neurotic heredity will be an important factor in determining the mental condition of the neurasthenic. The patient whose legacy is the incubus of neurotic instability will, under the stress of nervous exhaustion, be extremely likely to develop many symptoms on the mental side of the disease. Unless the weight of heredity be extreme, the neurasthenic psychosis (which has developed at the acme of exhaustion) will likely respond with reasonable promptness to rest, good feeding, appropriate environment, tonic treatment, and induced sleep.

Presenting a different picture, and yet to be classed with the neurasthenics, are the unfortunate heirs of hysterical tendencies. Deprived of their just share of inhibitory powers, lacking in will-power and force of character, they are naturally blown hither and yon by every breeze of nervous stress and strain. Hysteria may simulate other psychoses and so temporarily confuse as to diagnosis. Moral treatment here is even more important than in neurasthenia.

The delirium following the acute febrile states I wish to mention only to call attention to the fact that the preceding febrile condition has sometimes been overlooked, the patient's apparent physical power under excitement being mistaken for a genuinely sthenic state. Under such conditions removal to an institution involving a trying journey is not only a most unwise procedure, but it is fraught with the greatest danger to the patient and reflects no little discredit upon the physician advising the step. Such delirium can usually be successfully treated in a general hospital or in the patient's home, provided a competent nurse be secured, and the case be properly diagnosed.

But whether the case be one of a neurasthenic or hysteric

psychosis, an excited or depressed state, I wish to plead for the more rational treatment of the patient than is often accorded him by the general practitioner. I am not now arguing for the home treatment of insanity, for the reasons why institutional treatment is generally better seem to me numerous and obvious, and segregation from usual haunts and habits will put the hysteric or neurasthenic patient far sooner on the high road to recovery. The occasions are many, however, in which for varying periods of time the patient is in the hands of the doctor, and to him the family looks not only for direction as to the present management of the patient, but for advice as to the future disposition of the case.

Too often the patient is entirely left out of consideration. He is considered simply as "the case," as "insane," and so not to be trusted, seriously addressed, or reckoned with. No appeal is made directly to the patient. He is treated as the "third person." By way of illustration I may cite a case in which I was called and which had previously been seen by others, who, however, had always treated the patient in this unwisely indirect way. It was my good fortune to win the cordial approval of the family and friends by engaging the patient in a conversation in which she was considerately treated as the second and not as the third person, and during which the patient surprised her friends by giving me a very clear and explicit account of her mental trouble from its commencement several years before, explaining most entertainingly the succeeding phases of her mental state, and expressing, when the plan was proposed, her willingness to go to an institution for treatment, thus clearing up a delicate situation, the difficulties of which the friends had greatly feared.

To one of those lusty sthenic cases of excitement in a small country town, a farming community, a professional friend of mine was once called. He found a young and powerful man keeping busy in controlling him all of the available men of the surrounding district. In relays of four or six they laid hold on the struggling patient and managed to keep him in bounds. My friend is neither large of stature nor great of girth, and he astonished the wise ones in charge when he quietly bade them all leave the room, permitting him to be alone with the patient. They feared for his personal safety, but he insisted, and displaying a tact as wise as it is rare, he turned to the patient and said: "Isn't it true that you have been rather a leader among the young men hereabouts? Could any of them down you, outrun you, or beat you at any sport?" The interested and now quiet patient was an attentive listener. "You've been a pretty

well-balanced man," the doctor continued, "of good temper and able to control yourself pretty well. You've had, in fact, rather a reputation for that sort of thing?" The patient, forgetting his recent display, admitted that this was true. "Then," said the doctor, "you would not willingly wish to abandon that kind of prestige. You would not wish to be a fallen idol and hereafter pitied as a man who has given up self-control and can no longer manage himself? You would not, I am sure, want to lose the reputation you have here?" The patient confirmed his questioner's statements, but was led on thus: "This means, then, that you must resume the self-control which you've just been giving up. You must stop this sort of exhibition, show your friends that you can control yourself. I'll give you something to move your bowels and to secure sleep, and you'll get better promptly." And he did. The patient's aid was enlisted, and the further management of that case was greatly simplified. The actual physical conditions met with in an excited patient are too seldom taken proper account of, and yet they are the prominent factors many times which are determining the mental condition.

The hot skin, coated tongue, and foul breath all speak of locked-up secretions; the suffused conjunctivæ, excited appearance, and nervous condition generally tell of a lack of any adequate amount of sleep. Proper measures to relieve these obvious conditions will be greatly to the patient's benefit.

I wish to protest against the too frequent and ill-considered way of attacking such a patient. All measures are too commonly directed against the excitement, and the more vigorous than wise attendant seizes upon the bromides and chloral as the proper club with which to subdue it. He exultingly feels that as long as he keeps his patient under their influence, or narcotized with opiates, he has accomplished great things, when, as a matter of fact, the patient's condition has all the time been growing more and more critical.

A year and a half ago I saw in consultation a young man evincing a moderate degree of excitement with rapid, feeble pulse, whose attending physician said to me, "Oh! I keep him down all right; I run up to the house several times a day and just give him some *dope*." His "dope" was a mixture of the bromides and chloral, and I was horrified at the amount he was taking. I advised that he be removed to an institution speedily. This was done the next day, and I was not surprised when the superintendent later advised me that for forty-eight hours they had been very anxious about their patient because of his extremely weakened heart. A withdrawal of heart depressant drugs, appro-

priate tonic treatment, and other measures to secure sleep soon brought about the desired return of normal heart action. Excitement is not the "whole thing," nor is it to be subdued at any cost.

Sedatives, while not to be absolutely tabooed, must be judiciously used. Measures of hydrotherapy are altogether too little appreciated, and so they are much neglected. They will often accomplish in a harmless way what in a routine way is sought solely by the aid of drugs. To the average practitioner, perhaps, hydrotherapy suggests a sanitarium thoroughly equipped, and while you cannot give all forms of baths in the patient's home, yet much can be accomplished right there.

The bowels can be thoroughly washed out; that is possible in almost any home. It is often of value to wash out the stomach, though I appreciate that this may present obvious difficulties in some cases. If there be a bath-tub available, the sedative effect of a hot bath is not to be despised. But even if no bath-tub be at hand, the wet-sheet pack is a valuable measure not beyond the range of possibilities. Within the past ten days I proved its usefulness in the case of a woman of forty-four, whose pulse was 120, and none too good in quality; skin dry, though temperature normal. Her tongue was heavily coated, breath foul, and she was barely able to control herself, being "on the ragged edge" of excitement, and dramatically falling to her knees when I proposed to take her temperature. A bath-thermometer was not available, so I directed her sister to wring out a sheet saturated with water of a temperature a little higher than "blood heat," wrap the patient in the sheet, and over that enwrap her in at least two flannel blankets, the patient's head being wrapped in a cold wet turban. The patient's few feeble objections were easily overcome, and she remained through the night in the pack, sleeping most refreshingly. The clinical picture was quite different on the succeeding day. Self-control and appreciation of her condition, a moister skin, a better breath, and a cleaner tongue, indicated the great improvement.

Only recently the superintendent of one of our large asylums in writing to me said: "I have come to have very much reliance upon hydriatic measures properly applied in the treatment of these cases, and I think that the simpler forms can be readily applied in almost any household. One of the most effectual methods to quiet excitement, secure sleep, and promote elimination is the wet-sheet pack. Were I called to a private house this morning to see a case the type of which is familiar to us, with wakefulness, agitation, psychomotor restlessness, and the train of symptoms that accompany acute maniacal excitement or

agitated melancholia, I should, if it were possible, first give the patient a large simple enema of water at 100° F. I would then thoroughly wash out his stomach with sterilized water at about 107° F., and then wrap him up in a large wet sheet saturated in water at about 112° F., and then thoroughly roll him up in blankets, using two or three or more if necessary. A little experience will enable one to so envelop the patient in the wet sheet and blankets that however restless and uneasy he is, it forms one of the very best methods of restraint. We very often find that a patient in a wet-sheet pack soon quiets down and presently drops asleep, sometimes sleeping the night in the pack. In any event he often gets from one to two or three hours of refreshing sleep. When the pack is removed he can have an alcohol rub or a little light massage, which any intelligent person can give with a little instruction. There are dangers of collapse, but the signals of such danger are so plain that the doctor will recognize them very readily, and his patient may be removed from the pack and such methods of stimulation resorted to as may seem to be required. When in the pack ice to the head and hot-water bottles to the feet are important. This wet-sheet pack may be repeated when the patient again becomes restless or disturbed. The quantity of water which he drinks while in the pack promotes elimination, and this method is altogether so much more rational and simple than the heavy dosage by drugs that I think it important that it should be brought to the attention of every physician who is likely to have a case of acute insanity upon his hands for two or three days or longer."

With the foregoing, it is needless to say, I am most heartily in accord. Institutions are now accomplishing much by hydrotherapeutic measures in the quieting of excitement, which a few years ago was either neglected, allowed to wear itself out, or met only by the administration of drugs. Even general paresis has been greatly ameliorated by the systematic use of the cold pack. Distinct physical gains to the patient are also noted from this rational line of procedure. It is a pointer from which the general practitioner may well profit.

Berkley in his work on Mental Disease has rendered a distinct service in bringing out prominently the pathological histological conditions underlying the organic mental diseases. Many of these it is absolutely impossible for us by any human means either to permanently arrest or cure. In the earlier stages of mental disease, however, there are many physical conditions producing abnormal mental phases which we may by rational means do much to benefit and may often cure.

Let us be alive to our opportunities, note the family and personal history carefully, scan the case keenly, endeavor to diagnose it accurately, and then treat it rationally.

I am sure that rational means skilfully applied have in many cases arrested a threatened attack of either excitement or depression. Such an opportunity may come to any one of us.

270 Woodward Avenue.

American Medical Association.—At the recent meeting held in New Orleans, La., May 5 to 8, the following officers were elected for the ensuing year: President, Dr. John H. Musser, Philadelphia; first vice-president, Dr. G. C. Savage, Nashville, Tenn.; second vice-president, Dr. Isadore Dyer, New Orleans; third vice-president, Dr. C. L. Hall, Missouri; fourth vice-president, Dr. F. G. Jenkin, Iowa. Secretary, George H. Simmons, Chicago. Board of trustees, Dr. W. H. Welch, Baltimore; Dr. Miles F. Porter, Fort Wayne, Ind.; Dr. C. A. Powers, Denver, chairman; Dr. E. W. Andrews, Chicago, secretary. Hygiene—Dr. Alexander Lambert, New York, chairman; Dr. J. S. Miller, Chicago, secretary. Materia Medica—Dr. O. T. Osborne, New Haven, chairman; Dr. C. S. N. Hallberg, Chicago, secretary. Diseases of Children—Dr. C. G. Kerlay, New York, chairman; Dr. C. F. Wahrer, Fort Madison, Ia., secretary.

Subscriptions are now being collected to pay for a medallion by Boucher, to contain a profile of Dr. Henri Huchard, to be presented to him by his friends and pupils, in honor of the completion of thirty years during which he has been editor-in-chief of *La Presse Médicale*. Dr. Huchard, who is physician to the Necker Hospital, Paris, has recently been promoted to the grade of officer in the Legion of Honor. The chairman in charge of the committee having this affair in charge is Dr. Guyon; the secretary and treasurer is Dr. Fiessinger, 5 Rue de la Renaissance, Paris.—*Philadelphia Medical Journal.*

In Galicia the grammar schools have a single session, from 8 till 1, and the desirability of a change has been discussed. The medical association advises in favor of the present hours, as an afternoon session interferes with digestion and assimilation, while the best mental work is done in the morning. Owing to the prevailing local social, economic, and climatic conditions the association believes that two sessions would entail many more disadvantages than the present plan.—*Exchange.*

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

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EDITORIAL ARTICLES.

THE SPIRIT OF PROGRESS IN MEDICAL INSTITUTIONS.

The excellent address given by Dr. W. W. Keen, as president of the American Medical Association, is full of material which is worthy of full consideration by those who have at heart the interest of progressive medicine. The strenuous life of the American practitioner will be enough to provide the profession with active and energetic exemplars of scientific zeal, but some little adjustment will from time to time be necessary to keep medical institutions in touch with its best spirit; and it is to a consideration of this matter that the orator on the occasion mentioned confined his remarks.

Medical colleges and hospitals until recently comprised all that was possessed by the medical fraternity in an institutional form. To these have recently been added such organizations as the Carnegie Institute and the Rockefeller Institute. The former has already done much for the profession by continuing the publication of the *Index Medicus,* thus providing the profession with a means of readily supplying itself with reference literature on any subject. The Rockefeller Institute for medical research is as yet too young in the field to speak of its achievements, but these cannot fail to be forthcoming.

A spirit which still clings to some of our medical colleges, also to our hospitals, is subject to criticism. The appointments to such institutions are still tinctured with sectional feeling, friendship, association, and the influence of the clique is still largely a contributory factor in such appointments. There should only be two questions asked in considering the election of a professor or hospital man: Are his qualifications the best, from the standpoint of scientific attainment? and Is his character such as will make him a desirable and honorable member of the staff?

A difficult problem in hospital management is that of keeping the staff from becoming antiquated. As age advances a man is unable to keep pace with the feverish strides of medicine. He is incapable of constant study, and naturally lags in his work. A retiring age, as in the army and navy, is probably the best way of accomplishing this, and at sixty-two a hospital surgeon should gracefully retire and leave room for younger men.

The Sabbatical year, for rest or study, is given in some universities. This is a wise provision. It allows the professor to travel, to visit other scenes of scientific activity, to compare methods, and to enlarge generally the scope of his horizon.

The necessity of placing the best men at the top is the key-note of advance. Dr. Keen says: "We must remember that 'the world-field into which all nations are coming in free competition by the historical movement to which all narrower policies must sooner or later yield, will be commanded by those races which, in addition to native energy and sagacity, bring the resources of scientific investigation and of thorough education.' The international race for the leadership of the world is just as strenuous and intense in medicine as it is in commerce. If we are going to join the race and win the prize there must be the highest development of American education at the top. The best men must be pushed to the front, and ample opportunities for growth, for investigation, and for original research must be provided. Never has there been so large an opportunity for the man of large ideas, complete education, and indomitable energy and purpose as there is to-day. The world is waiting, looking, longing for him, and will cry 'Make room' for him when he is found."

EDITORIAL NOTES.

Postgraduate Instruction Free of Charge.

The German government has during the past few years established a system of giving physicians of that country an opportunity of doing postgraduate work free of charge. The first step in this direction was taken in the year 1900, when a series of lectures on tuberculosis and its modern treatment were delivered in Berlin, chiefly with a view to popularize and support the movement in favor of sanitariums. These lectures were a great success, so that in the autumn another series were delivered on venereal diseases. No fees were payable for attendance on these lectures, which were delivered under the auspices of the govern-

ment by professors, privat-docents, and other specialists. About the same time similar lectures were delivered in various universities and some of the largest towns, and everywhere met with the approval of the medical profession. In 1901 a central committee was formed in Berlin for the purpose of organizing gratuitous postgraduate courses on a greater scale throughout Prussia. This committee, of which Professor von Bergmann is the chairman, has now instituted such courses in twenty-three towns, and has, moreover, acquired a collection of medical books, tables, pathological specimens, microscopes, and instruments to be used in connection with the lectures, and especially to be lent to the local committee in small places where such means of instruction are not sufficiently available.

This admirable plan is well worthy of emulation in this country, although owing to our different form of government it might be difficult to do it as well as the Germans.

An Expose of the Koch Lung Cure Fraud.

The May number of *Physical Culture* contains an exposé by Gerald Keating of the fakirs who are trading on the name of Prof. Robert Koch, the German scientist. The writer of this article has made a painstaking investigation of this fraud, and has brought to light facts that ought to be sufficient to land these charlatans in jail. This is probably the first time that an advertising medical concern has been shown up in its true light. Newspapers which are run entirely from the counting-room, and which derive a large portion of their income from the charlatans of this class, are silent on such subjects. The field for making exposures of this kind is a great one, and it is to be hoped that the writer of this article will not be content to stop, but will continue his good work along other lines.

The Address of Dr. Billings.

The address delivered by Dr. Billings at the opening of the recent session of the American Medical Association held at New Orleans is a severe arraignment of the present system of medical education in this country. The speaker reviewed medical education in this country from its earliest inception to the present time, pointing out the manner in which our earlier medical colleges were founded by groups of medical men whose chief aim was self-advancement. The small proprietary colleges must, in the opinion of Dr. Billings, sooner or later go to the wall, owing to the fact

that the teaching of medicine is becoming more and more expensive each year. He thinks it impossible for small institutions to keep up with the march of progress on account of the large amounts of money which must necessarily be expended in laboratories and expensive equipment now so necessary to the proper teaching of medicine. A decided stand is taken for the advancement of medical education. Much confusion exists at present in our laws governing medical reciprocity. The remedy suggested by Dr. Billings is an excellent one, and something of the sort must eventually be put into practice. He suggests that a national board of medical examiners be organized, and that the certificate of this board shall be recognized as a license to practice in all the States and Territories.

A Singular Method of Self-murder.

From Rheims comes the report of a strange method of committing suicide. A man procured a spade, sharpened the edge, and fixed the implement blade downward to the end of a carpenter's bench, which he heavily weighted. He then placed a block of wood under the same end of the bench in such a fashion that the block could easily be removed and so let the bench fall, together with the sharpened blade. When these preparations were completed the man lay down and placed his neck on a thick piece of wood directly under the spade and kicked the supporting beam away, with the result that his head was immediately cut off. It seems singular that in these latter days, when poisons are so easily obtainable, any one should resort to such primitive means for ending his life.

Fraudulent Hospital Appointments.

During the past month the profession of this part of the country has been flooded with literature purporting to come from the management of a hospital in Chicago called the Christian Hospital. The name of one of Chicago's best known surgeons has been used, doubtless without permission, as the chief of the staff. The other names with one exception are not to be found in the Medical Register. The plan of the fakirs is nearly the same as that used by the infamous St. Luke's Hospital of Niles, Mich., a few years ago. Offers of appointment on the hospital staff, together with diplomas, are made at the sum of $20 or $25. It is a sad commentary on the intelligence of the profession that any set of charlatans should find it worth while to go to the trouble and expense of sending out such circulars.

ITEMS AND NOTES.

CHOLERA has reappeared at Manila and in the archipelago, and is increasing with the return of the hot season.

POSTAL CARDS bearing the portrait of the late Professor Virchow are being sold in enormous quantities all over Germany.

A DESPATCH from Guayaquil, Ecuador, states that Callao and Piser, Peru, have been officially declared infected with the bubonic plague.

SIR FREDERICK TREVES, who was an examiner in medicine in the University of Aberdeen nineteen years ago, received the honorary degree of LL.D. April 8 last.

IN a report by Dr. George Sover, of the New York State Board of Health, the number of cases of typhoid in Ithaca was given as 95, of which 64 were fatal.

ACCORDING to Boston health statistics, there were 1033 deaths from heart disease in Boston during the past year, showing an increase of seven per cent in fifty years.

A CABLEGRAM has been received by the State Department, Washington, from Buenos Ayres, confirming the reported outbreak of foot-and-mouth disease in the Argentine Republic.

BETWEEN December 27, 1902, and April 24, 1903, 15,919 cases of smallpox with 441 deaths have occurred in the United States, as compared with 29,666 cases with 882 deaths for the same period last year.—*Exchange.*

DR. H. H. RODMAN, of New York, who was surgeon of the hospital ship *Maine*, has been presented by the British War Office with the war medal and clasp for the South African war, and also with the medal for the China war.

SOME sixty or more cases of typhoid fever have developed at the Leland Stanford, Jr., University, and Palo Alto, Cal. The cases have been of a mild type, and seem traceable to the milk supply of one of the Palo Alto dairies.

ANTI-VACCINATIONIST DIES OF SMALLPOX.—Charles Stevens, secretary of the Anti-vaccination League of Minneapolis, died from smallpox April 15. He had frequently denounced vaccination as inefficacious and a barbarous practice.

THE bill fixing a penalty of $100 or six months' imprisonment for the sale of cocaine, or any patent or proprietary remedy containing cocaine, without a physician's prescription, to a habitual user of cocaine, has become a law in Pennsylvania.

AT the first annual meeting of medical editors in New Orleans recently a committee was appointed to draft resolutions condemning the action of Third Assistant Postmaster Madden relative to a recent ruling made by him regulating second-class mail and affecting the medical journals.

PROF. G. ROMITI, of Pisa, celebrated on March 5 the twenty-fifth year of his incumbency of the chair of anatomy at Siena and Pisa. He was presented with a souvenir volume of "Archivio Italiano di Anatomia ed Embriologia," a gold medal, and several scientists gave him special volumes of their works.

A POLYCLINIC has just been opened in the Rue Mercadet, Paris, by Baron Henri de Rothschild, who purposes giving lectures to medical students and doctors on the treatment of newborn children, among whom the mortality is very great in France, in connection with the decrease of population.—*Exchange.*

AT a meeting of the International Executive Committee of the Pan-American Medical Congress, held April 1, 1903, it was decided to accept the proposal of the Argentine Republic to hold the fourth Pan-American Congress in Buenos Ayres in 1905 instead of 1903, as had been announced in their invitation of February, 1901.

AMERICAN physicians and dentists will now be on the same standing in Turkey as are those of France. They have heretofore been refused examination and could not practice. They will now be allowed to practice if they present good diplomas and pass the examination. This is the result of pressure brought to bear on the Sultan by President Roosevelt and U. S. Minister Leishman. —*Exchange.*

THE sum of $15,000 has, after thirty-four years of untiring effort, been raised to erect a fitting monument to the memory of Benjamin Rush. The movement was set on foot in 1879, at the meeting of the American Medical Association in New Orleans. Of the three boards of trustees in charge of the movement, Dr. Henry D. Holton, of Vermont, who has served on the three boards, is now the only surviving member of the first two boards. Dr. Holton is president of the American Health Association.—*New York Medical Journal.*

It is announced that Prof. Joseph Seegen proposes to offer a prize under the auspices of the Imperial Academy of Sciences in Vienna for the best answer to the following question: "Is any part of the nitrogen of the albuminates which have undergone metabolism in the animal body eliminated either by the lungs or by the skin in a gaseous form?" The prize offered amounts to about $1000, and essays may be written in German, French, or English, and must be sent before February 1, 1904.—*Philadelphia Medical Journal.*

A scientific expedition, under the auspices of the Geographical Society of Baltimore, sailed for the Bahama Islands June 6. The bacteriologic and medical research work will be under the direction of Dr. Clement A. Penrose and four medical assistants. All branches of science will be represented. The members have been drawn chiefly from the Johns Hopkins Hospital and University, the latter contributing $500 to the work. Private citizens have also given generously, and the researches will occupy two months.—*Journal of the American Medical Association.*

American Academy of Medicine.—At the meeting held in Washington, D. C., May 11 and 12, the following officers were elected for the ensuing year: President, Dr. John B. Roberts, of Philadelphia; vice-presidents, Drs. T. B. Davis of Pittsburg, J. H. McBride of Pasadena, Cal., J. P. Searcy of Tuscaloosa, Ala., and S. A. Knopf, of New York; secretary, Dr. Charles McIntre, of Easton, Pa.; assistant secretary, Dr. A. R. Craig, of Columbia, Pa.; treasurer, Dr. E. A. Green, of Easton, Pa. The next meeting will be held at Atlantic City, N. J., June 11 to 13, 1904.

The sale of cocaine in Minnesota is to be regulated under a bill recently introduced in the lower house of the legislature of Minnesota. Under this bill cocaine may be sold at retail only by pharmacists, and at wholesale only to pharmacists. Druggists may sell cocaine only on the written prescription of a physician or dentist, and such prescription may be filled only once. It is also provided that any patent medicine, catarrh powder or remedy, snuff, cream, or other mixture containing cocaine, must have a label stating that fact in the English language. A violation of the act is made a misdemeanor, punishable by a fine between $50 and $100, or imprisonment from thirty days to one year. One-half of all such penalties shall go to the State Pharmacy Board, and one-half to the county school fund.—*New York Medical Journal.*

NEW PUBLICATIONS.

MEDICAL AND SURGICAL ELECTRICITY.

This manual of medical electricity has been before the profession for some time, and having gone through eight editions is sufficiently familiar to medical readers to need little in the way of introduction. The new edition of necessity presents many changes, as the science of electrical therapeutics has undergone a vast transformation in recent years. The *x*-ray, the Finsen light, vibratory therapeutics, and high-frequency currents have extended largely the range of practical therapeutics, and to comprehend the scope of these advances has necessitated the addition of several new chapters. The pervading idea of the author's work is the nutritional influence of electricity, and upon this fact he bases his claim for its employment in medical therapeutics.

Readers interested in this department of medical science will find this book to fulfil their expectations, in providing a guide to the employment of electricity in all conditions of the body.

The Medical and Surgical Uses of Electricity. By A. D. Rockwill, A.M., M.D. New Edition; 250 Illustrations. Price, $5.00. New York: E. B. Treat & Co.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS.

The last number of this excellent series is a volume on Obstetrics by Professor Peterson. Progress in the obstetrical art is admirably summed up. The present volume is one of a series of ten which are published at intervals, and which together cover the whole field of medicine and surgery. They form an admirable method of keeping the general practitioner abreast of the times.

The Practical Medicine Series of Year-Books. Volume V: Obstetrics. Edited by Reuben Peterson, Professor of Obstetrics, University of Michigan. Chicago: The Year-Book Publishers.

UTERINE AND TUBAL GESTATION.

The reader will find this a complete monograph on the subject of extra-uterine pregnancy. An attempt has been made therein to cast light upon several doubtful problems, especially the origin of the syncytium. The work is well illustrated, and is a useful commentary on an important subject.

Uterine and Tubal Gestation. A Study of the Embedding and Development of the Human Ovum. By Samuel Wyllis Bandler, M.D. Illustrated by 93 Drawings. New York: William Wood & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Peritonitis in Typhoid Fever.

J. L. Yates (*American Medicine*, May 2, 1903) says non-perforative peritonitis usually results from an extension of inflammation through the bases of deep intestinal ulcers, but may also arise from the migration of bacteria through an intestinal wall which is relatively but slightly abnormal.

Meteorism thus predisposes to infection of the peritoneal cavity, and by decreasing the normal peritoneal absorption furnishes a secondary cause for peritonitis.

A hematogenous origin of peritonitis is possible in typhoid fever.

Non-perforative peritonitis is commonly caused by the typhoid bacillus, and the resulting inflammation is usually diffuse and often severe.

The inception of such a peritonitis is clinically indistinguishable from the so-called signs of perforation, and the symptoms in both are due to peritoneal inflammation. The prognosis is probably equally grave in the two forms.

There should be appropriate surgical intervention immediately the peritonitis can be recognized. Enterostomy is indicated when there is meteorism with the peritonitis, or when it affects the prognosis and is intractable to ordinary therapeutics.

Thrombi, and among them those composed of agglutinated red blood-corpuscles, may lead to hemorrhages into the wall of the intestine, and the resulting changes favor the transmigration of bacteria into the peritoneal cavity.

Infarction of the spleen may have a similar thrombotic causation, but simple splenic infarction is probably not a cause of peritonitis.

The specific action upon human blood of an agglutinin generated by the typhoid bacillus can be demonstrated *in vitro*.

The Importance of an Early Diagnosis in Cancer of the Stomach.

It is desirable, according to Mayo Robson (*British Medical Journal*, April 25, 1903), to make an early diagnosis of cancer of the stomach in order that a radical operation may be per-

formed at the earliest possible moment. The writer says that it may be needful to perform an exploratory operation in order to complete or confirm the diagnosis.

That such an exploration may be done with little or no risk in the early stage of the disease.

That even where the disease is more advanced and a tumor perceptible, an exploratory operation is as a rule still advisable in order to carry out radical or palliative treatment.

That where the disease is too extensive for any radical operation to be done, the palliative operation of gastroenterostomy, which can be done with very small risk, may considerably prolong life and make the remainder of it much more comfortable and happy.

That some cases, thought at the time to be cancer, too extensive for removal may after gastroenterostomy clear up completely and get quite well.

That in cases of disease of the cardiac end of the stomach too extensive for removal, the operation of gastrostomy may considerably prolong life and prove of great comfort to the patient by preventing death from starvation.

That even where the disease is too extensive either for removal or for a gastroenterostomy being performed with a fair chance of success, the operation of jejunostomy may occasionally prove of service to the patient.

That where a radical operation can be performed the thorough removal of the disease may bring about as much relief to the patient as does the operation for the removal of cancer in the breast, uterus, and other organs of the body, and that in some cases a complete cure may follow.

Shock Produced by General Anesthesia, with Relation to Disturbances of the Blood and Gastro-intestinal Tract.

Fenton B. Turck (*Journal of the American Medical Association*, May 2, 1903) says the complex clinical picture of the after-effects of chloroform or ether anesthesia is made more clear by experimental research, from which we may deduce the following facts:

The circulatory disturbance is a direct result of the chloroform or ether acting on the vasomotor centers.

The prolonged effect of chloroform and ether on the splanchnic circulation results in congestion associated with fall in temperature. Temperature may fall without fall in blood-pressure.

The direct effect of the toxins of chloroform and ether acting on cells, with disturbance of metabolism, may produce toxic products.

The resulting elaboration of toxins produces symptoms of "autointoxication," associated with the formation of hemolytic and agglutinating bodies, and precipitins.

Indirect toxic effects result from retention of toxic products through excreted toxins.

There is diminished resistance to the development of saprophytic and pathogenic microörganisms.

This may be partly explained by the changes observed in the sera, such as diminished antiferment properties, hemolysis, agglutination, precipitins, etc.

That reflex effects result, such as reflex irritation set up by the excretion of the anesthetic into the stomach and intestines.

As the result of atony there is a formation of toxins in the stomach and intestines through bacterial growth.

Atony of the stomach and intestines results in the accumulation of gases and interference with the circulation.

There is increased toxicity of the stomach contents in the presence of chloroform and ether.

Exaggeration of Reflexes in Cancer.

Dr. Buck and O. Vander Linden (*Scottish Medical and Surgical Journal*, April, 1903) have examined the condition of the reflexes in cases of cancer, and have found in every case, irrespective of the site of the cancer, exaggeration of the tendon reflexes, amounting in some cases to actual clonus: the state of the cutaneous reflexes was more variable, but sometimes they were also exaggerated, especially the abdominal reflexes. Short notes are given of five cases of cancer (pylorus, uterus, rectum, breast), in all of which the tendon reflexes were markedly increased, and in three clonus was present. In no case was the plantar reflex of the extensor type (Babinski's sign). In cases of sarcoma the same exaggeration of reflexes was found.

Whilst admitting that this condition of the reflexes occurs in other dyscrasiæ (*e. g.*, syphilis, tubercle, chronic septicemia, pernicious anemia), the authors think that this sign is a valuable one in the diagnosis of malignant disease, especially in doubtful cases affecting a deep viscus, inasmuch as it is found in an earlier stage of the malignant intensity than is the case in the other toxemias.

As regards the cause of the exaggeration of reflexes, they do

not think that it is due to reflex irritation from the toxin of the neoplasm, or to a systematic affection of the pyramidal tracts; they incline rather to the view that the lesion of the central nervous system is of the nature of a diffuse degeneration, such as occurs in pernicious anemia.

Fatal Meningitis, with Myosis and Salivary Suppression as the Only Symptoms.

H. Altshul (*New York Medical Journal,* April 25, 1903) gives the details of his case, which was that of a man of fifty-three years. The author gives the following conclusions:

That extensive meningitis can exist without giving rise to its characteristic and usual symptoms.

That sepsis does not always cause changes in pulse and temperature, and that their being normal does not warrant our excluding this condition.

That a spasmodic and complete occlusion of the ureter, which is not due to impaction of renal calculi, may last for some time and thus prevent the detection of extensive pyonephrosis.

That myosis and salivary suppression may be the first symptoms of meningitis or myelitis.

Surgical Hints.

The following hints are from the May issue of the *International Journal of Surgery:*

In cases of injury to the brain, operation is never permissible unless there is distinct evidence of the fact that some condition exists which trephining will probably relieve. Even a bullet or large body is not sought for unless it gives clear symptoms of compression or irritation, or unless hemorrhage is going on.

In children prone to the development of so-called scrofulous glands of the neck, it is a mistake, unless they rapidly disappear under the influence of local and general treatment, to await the formation of abscesses. The latter cause more marked cicatricial deformity than does proper incision with enucleation, and there is always a possibility of systemic infection from the abscess.

It is well to remember that cervical adenitis is often caused by the presence of pediculi of the scalp. It is more frequent in girls than in boys, owing to the greater length of the hair, which harbors a larger number of insects, thus causing more irritation, and hence more eczema due to scratching. In looking for pediculi, they are most easily found in girls in the hair growing

lowest at the back of the neck, and in boys in the lank hair back of the ears.

In a case of gonorrhea in the male, a chill occurring without swelling of the external organs strongly suggests the possibility of prostatic abscess. Always examine by the rectum, and if the gland is large and tender and hard, though elastic, little time should be wasted before opening the perineum. The old method of opening through the rectum with a trocar is a bad one, because it is unclean and liable to result in the formation of urethrorectal fistula, and because the abscess cannot be incised and drained as widely as by the perineal route.

MEDICINE.

Adrenalin Glycosuria.

Hester and Wakeman (*American Journal of the Medical Sciences,* January, 1903) in giving a summary of their observations and experiments upon the pathology of adrenalin glycosuria point out that its intensity and duration depend partly upon the method of administration and partly upon the dosage. Direct applications to the surface of the pancreas of an exceedingly small quantity of adrenalin usually cause a considerable excretion of sugar, while the reaction becomes less in direct proportion according as the administration is intravenous, intraperitoneal, or subcutaneous, the result being slightest after dosage by the mouth. This relative inertness when administered by the mouth appears to be due to the readiness of adrenalin to become oxidized, thus losing its blood-pressure-raising properties, and when in the stomach a considerable proportion is destroyed before absorption takes place. Experimentally painting the pancreas of a dog with 0.01 gramme of adrenalin substance was productive of 23.4 grammes of glucose, but the susceptibility of different dogs to reaction varies considerably. The sugar of the blood becomes regularly increased, but falls rapidly with the decline of the sugar in the urine, the volume of which latter is distinctly in excess, and this occurrence of glycosuria was shown to be independent of changes in the general pressure.

Observation upon the sugar of the blood of the femoral artery, portal vein, and hepatic vein after treatment points to an increased production of sugar in the liver. That adrenalin in producing glycosuria acts chiefly upon the cells of the pancreas is presumed from the fact that the glycosuria is more marked

after painting on, or injection into, the gland than after similar treatment of the brain, spleen, liver, or kidneys. The action of potassium cyanide in producing glycosuria when applied to the gland substance, while it has no such effect when introduced into the circulation or into other organs, lends support to the theory that the pancreas is chiefly concerned in the production of adrenalin glycosuria, the glycogenetic function of the liver being stimulated through the sympathetic nervous system. Adrenalin exerts its influence probably by a toxic action upon the cells of the pancreas, more especially in the islands of Langerhans, though lesions of these structures were not a constant accompaniment in experimentally-produced glycosuria, and when present were generally associated with alterations in other structures as well. That the adrenals normally influence carbohydrate metabolism by virtue of their internal secretions seems highly probable, but experimental evidence so far does not afford complete proof, since the glycosuria which follows even slight compression or injury to these organs may be due to some nervous influence yet imperfectly understood.

A Demonstration of Some Experiments on the Nature and Specific Treatment of Hay-fever.

F. Semon (*British Medical Journal,* March 28, 1903) draws the following conclusions: (1) There can be no doubt that Dunbar has succeeded in extracting from the pollen of certain grasses (maize, wheat, rye, etc.) a toxin which, when instilled into the eye or nostrils of people predisposed to hay-fever, produces in these parts the characteristic subjective and objective symptoms of the disease. (2) The toxin, when injected into the eyes or nostrils of people not predisposed, produces in the great majority of cases no symptoms whatever. But it certainly appeared as if there were instances of transition in which, although the persons experimented upon never suffered from typical hay-fever, they were yet more susceptible to the influence of the toxin than the ordinary run of people. (3) The effects of the toxin in people suffering from hay-fever are as variable in intensity as are the attacks of the affection itself, both with regard to the local and the constitutional symptoms. (4) Dunbar's antitoxin certainly produced immediate disappearance of the subjective, and after a few minutes great amelioration of the objective, symptoms. (5) The mixture in equal parts of a toxic solution (1 in 500) and the antitoxic serum suffices to neutralize the specific effects of the toxin. (6) The effects of

the antitoxin appear in some instances to be sufficient to prevent a reappearance of the subjective symptoms, while in other instances repeated instillations of the antitoxin were required to produce ultimately the return to normal conditions. But all we know at the present is not sufficient to build therapeutic hopes on, and this for the reason that we are ignorant of the nature of the special predisposition which exists in hay-fever subjects.

Cream for the Home Modification of Milk.

C. W. Townsend (*Boston Medical and Surgical Journal,* April 16, 1903) has from his studies of this subject drawn the following conclusions:

Centrifugal cream is probably less desirable for infant feeding than gravity cream. As obtained from dealers it is often far from accurate in percentage. (2) Siphonage for obtaining gravity cream is an accurate method, but one requiring considerable skill to perform accurately and safely. (3) Dipping off the top milk is an accurate and safe method if reasonable care is used. (4) The method for obtaining gravity cream by pouring off the top is very accurate and extremely simple; there is no instrument to be bought and kept clean. By this method it is possible to obtain cream of any desired percentage up to twenty-six. (5) To insure perfect accuracy frequent examinations with the Babcock machine are required, but for practical purposes this is not necessary, provided the mixed milk from a well regulated dairy is obtained.

Spastic Obstipation.

Singer (*Wiener klin. Wochenschrift,* No. 14, 1903) describes the symptomatology, pathogenesis, diagnosis, prognosis, and therapy of this malady, of which but little is known, and which is so unsuccessfully treated with laxatives. He differentiates a symptomatic and idiopathic form of the condition. On the boundary between the secondary and purely nervous form of spastic obstipation there frequently occurs a variety accompanied by disturbances of the sexual apparatus; the nervous forms occur in hysteria and neurasthenia. The objective symptoms evidence a contraction of the internal sphincter, a tenderness on palpation in different regions of the abdomen, occasionally colicky spasms occur, and not infrequently mucous casts and blood are passed. The writer emphasizes that spastic obstipation is found independently of other diseases such as hysteria, etc. Therapeutically

he recommends moist heat, oil enemas, and belladonna, and for years he has employed with good results the introduction of English rectal bougies. The dietetic treatment is of little importance.

The Value of the Diazo-reaction in the Prognosis of Tuberculosis.

Gieseler (*Zeitschrift für Tuberculosis,* Bd. 111) examined 100 patients for four months in order to determine the frequency of the occurrence of a diazo-reaction. The reagent used was paramidoacetophenon .25, hydrochloric acid 25.0, distilled water 500; one to two drops of a .5-per-cent solution of sodium nitrite is added to this solution, an equal part of urine is then mixed with it and thoroughly agitated, and one cubic centimeter of ammonia is then added. A positive reaction is shown by the foam being colored red. The reaction was demonstrated in all cases of caseous tuberculosis, but with the exception of these cases only six per cent gave a positive reaction, and all of these were in the third stage of the disease. The greater half of all clinically hopeless cases give a negative result. The reaction therefore is not worthy of consideration in making a prognosis.

THERAPEUTICS.

Barium Chloride as a Cardiac Tonic.

Dr. Schedel (*Lancet,* April 18, 1903) recently read a paper before the Berlin Verein für Innere Medicin on the action of chloride of barium on the heart. Making his preliminary experiments on himself, he found that when he took 0.02 gramme (one-third of a grain) twice a day after meals his pulse-rate fell from 55 to 51 and from 66 to 61, whilst his blood-pressure as measured with Gaertner's tonometer showed a rise of 10 millimeters. When the dose was increased to 0.05 gramme (three-quarters of a grain) the rise in the blood-pressure amounted to 30 millimeters. The effect was perceptible even three days after taking the last dose, and no undesirable result was experienced. Chloride of barium was then administered to nineteen patients, some of whom suffered from heart disease and asthma, while others were the subjects of pulmonary tuberculosis, leukemia, or chlorosis, in consequence of which their blood-pressure was low. Under this treatment the patients improved very much; cyanosis

and edema disappeared; the pulse became regular, full, and less frequent; the blood-pressure rose; and the secretion of urine increased. The effect on the blood-pressure only continued for three days as a rule, but the improvement in the pulse and in the patients' general condition was apparent even after the lapse of eight days. Chloride of barium might therefore replace digitalis in the treatment of many organic diseases of the heart, whether of the muscular substance or of the valves.

In the discussion Dr. Aronson, of Ems, made a reference to the action of chloride of barium on the intestine. He said that in veterinary medicine intravenous injections of it were given for colic, and that the treatment was followed by serious complications and even by death. To this Dr. Schedel replied that toxic effects occur only when large doses are given; with small doses such as he recommends no action on the intestine is observed.

Acne Rosacea and Phototherapy.

At a recent meeting of the Paris Academy of Medicine, M. Leredde (*Lancet*, April 18, 1903) gave a most interesting account of his experience of the above mentioned treatment. Acne rosacea is in general a most stubborn complaint, and has to be treated for a long time with ointments, scarification, and electrolysis. Phototherapy, however, has advanced the treatment very considerably, and Finsen has met with success from this method even in severe cases which had lasted for a long time. M. Leredde gave an account of eight cases treated by him in this manner, in all of which a good result was obtained. At first the treatment took a long time, for he was afraid that if he gave sittings of over half an hour troublesome scarring would result. But little by little he found that the patient could be safely exposed for just as long a time as in cases of lupus, and he never met with any scarring as a sequela. Following out these lines of treatment he had been able in two or three weeks to cure cases of acne rosacea which had resisted other much more severe methods for months.

The Treatment of Cardioptosis.

Max Einhorn (*Medical Record*, April 25, 1903) says that improvement of nutrition and strengthening of the nervous system must be considered the main objects in treating cardioptosis. The first is accomplished by a generous diet, the latter by methodical strengthening of the body by means of cold ablutions, mod-

erate gymnastic exercises, and sojourn in the open air. Besides these two points any factor that tends to affect the position of the heart should be avoided. The patient will therefore have to be told not to remain too long in a stooping position. During sleep it might be advisable to place the head and thorax as nearly horizontal as possible, or in a position only slightly elevated. Means for direct support of the heart are hardly indicated. A suitable support might be applied at the beginning of the lower third of the thorax, exerting an upward pressure. A woman's corset with a left breast pad might serve as an example. The writer, however, has no personal experience with this procedure, and he would not discuss these mechanical means further.

Encouraging words, and occasionally a sedative like bromide of soda, tincture of valerian, etc., are sometimes necessary, and in patients who are excited over their condition, or who have been worried about their health, are often of the greatest value.

Hygienic and Dietetic Treatment of Syphilis.

Block (*Zeitschrift für diat. und physik. Therapie*, Bd. 6) calls attention to the necessity of preventing bodily and mental fatigue and obtaining the requisite amount of sleep in the treatment of syphilis. A heavy and luxurious diet is injurious, and light, simple meals and large amounts of milk are to be recommended. As alcohol predisposes to the degeneration of the nerves and vascular system, its use should be limited, and the danger of leucoplasia oris may be lessened by abstinence from tobacco. Syphilogenous neurasthenia and depression may be overcome by mild hydropathic treatments combined with a sojourn in the country. Regarding the psychical treatment the author believes it expedient to thoroughly advise the patient regarding the conditions and results of the disease so that he may not underestimate or exaggerate the malady.

The Treatment of Whooping-cough with Quinine.

Paul Heins (*Medical Press*, April 29, 1903) writes that he has treated eighteen cases of whooping-cough with quinine with good results. In the case of children under a year old he gave, at three times, as many centigrammes as they were months old. Children from one to four received as many decigrammes as they were years old. Children over four received 1½ grammes once daily; then, for three days together, twice a day; after this the dose was diminished. The whole treatment lasted from ten

to twenty days. The quinine shortened the disease and mitigated the attacks. Improvement was often observed from the second day. Antipyrin had no favorable effect. He was of opinion that quinine was borne better by children than by adults. The treatment was the more successful the earlier begun.

Abortive Treatment of Furunculosis.

Reich (*Zeitschrift für diat. u. phys. Therapie,* Bd. 6) bases his treatment on the belief that by the application of dry hot air to the skin the heat is easily transmitted to the tissues. Furunculosis is due to the invasion of cocci, and the foci of invasion are superficial, thus the agent readily reaches them. Air heated to 100° to 120° C. is sufficient to reduce the virulence of these staphylococci, and the hyperemia thus produced brings about a rapid absorption of the infiltration. The first day two or three applications are advisable, later once a day is sufficient. The author finds the results exceedingly gratifying, and demonstrates them by a number of clinical histories.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Fistula of the Cornea.

To obviate the danger of injury to the lens during the treatment of a corneal fistula, J. M. Ball (*St. Louis Medical Review,* April 11, 1903) proposes the following operation:

The keratome is to be introduced into the anterior chamber, as in the first step in the operation for iridectomy. The tip of the instrument is to pass beyond the fistula area, and the instrument is then to be held *in situ* while a cautery is used to destroy the epithelial lining, the tag of iris tissue which is often present in the fistula, and the bulging bleb of Descemet's membrane. The keratome is to be withdrawn carefully to avoid injury to the lens. Atropine and a compress bandage are to be used in the after-treatment. During the operation the lids should be separated by a speculum and the eyeball should be fixed with forceps. It is necessary that the forceps should be placed several millimeters behind the point at which the keratome is to be introduced. If the forceps be placed on the globe at a point opposite the place at which

the keratome is to be passed, the globe may be subjected to sufficient pressure to cause a rupture of the weakened area. The operation must be postponed until such time as the anterior chamber shall have reformed.

The Nasal Origin of Iritis.

L. C. Bachand (*Le Bulletin Médical de Quebec*, February, 1903) concludes that: (1) The etiological causes of iritis are numerous, and iritis called idiopathic tends more and more to disappear from pathological records. (2) The infectious origin of iritis is demonstrated by the existence of numerous and indisputable facts. (3) The nasal origin is demonstrated: (*a*) by the absence of causes generally invoked in the production of iritis; (*b*) by the coincidence of the beginning of iritis with a nasal inflammatory attack; (*c*) by the influence of treatment or the rapid disappearance of ocular affection. (4) The pathogenic study of this affection is represented by three theories: the nervous theory, the vascular theory, and the infectious theory; it is the last, based on recent observation, that seems the best. (5) The symptoms of iritis of nasal origin are those of iritis in general. (6) The prognosis is good, excepting the old cases, in which pupilary occlusion necessitates surgical intervention. Treatment consists in allaying pain and avoiding synechiæ, and especially in treating the primary nasal affection.—*Medical Record.*

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

In the Hemisphere of X-ray Activity.

J. Rudis Jicinsky, of Cedar Spring, Ia. (*New York Medical Journal*, May, 1903), says that the best skiagraphs and the best results in the treatment with the unknown ray of Professor Roentgen are obtained in the hemisphere of *x*-ray activity or the field of the best rays of penetrating properties. These hemispheres or fields of activity or non-activity of the *x*-rays in a Crookes tube may be seen and made out better fluoroscopically and determined photographically, if one wishes to. Within the limits of this hemisphere of activity an object opaque to the *x*-rays will cast a shadow, easily detected with the help of the

fluoroscope or by the image it produces upon the photographic plate; but to know and to find out exactly the best point of the best rays of *x*-ray order is the main part in the new art of proper diagnosis and treatment in medicine and surgery. When the point is known, it is comparatively easy to secure proper illumination and position of the subject in skiagraphy, and in therapy the most astonishing results.

It is a matter of fact, and any one may satisfy himself by experiment, that the *x*-rays are projected in all directions from that side of the reflector opposite to the cathode. When the tube—a focus tube—is very low, the electrical force behind very small, one may observe a peculiar cathode stream, in the form of a pencil of violet color, strike the middle of the reflector in the tube, forming a little later two sharp lines of violet color on both sides of the anode exactly where, on increasing the force behind, the line of demarcation between the two hemispheres will appear and give the peculiar green field of the *x*-rays; the point where the cathode rays strike first is the first to get hot during the work, and that seems to be the best proof where to look for the most beautiful *x*-rays altogether. From this point an imaginary line drawn perpendicularly at right angles through the tube will show where the maximum therapeutic field in *x*-ray treatment of any lesion may be found, or where the subject skiagraphed has to be, to give the proper and best picture without distortion on short exposure. This point must and most assuredly will depend upon the form of the tube, the form of the cathode and the anode, with or without a separate reflector, and upon all the individualities of the tube itself. It is therefore necessary to find out the source and the proper point of the *x*-ray in each individual tube before one can repeat the best photographic features of others or expect any results in therapy.

No matter how well the static machine or coil does its work, one will never get good results unless one uses a good tube with the proper source of electricity behind; and it makes no difference whether it is a static or a coil, the tube with both being equally dangerous in unnecessarily prolonged exposures and in unskilful hands. One must remember that the vacuum of a Crookes tube is a constantly changing quantity and should not be relied on to remain constant; it differs in different tubes, and sometimes in one and the same tube. One therefore has always to watch his tube. To know one's tube, the resistance of the same, and especially the proper technique in illumination, is the main key to successful skiagraphy, and *x*-ray therapy.

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ORIGINAL CONTRIBUTIONS.

OPERATIVE TREATMENT OF GLAUCOMA.

BY W. A. HARPER, M.D., AUSTIN, TEX.

The name glaucoma is a misnomer, since it is suggested by one of the rarest symptoms of the disease, viz., a greenish appearance of the pupil.

Many attempts have been made to change the name to something more appropriate, but so well established was the name glaucoma before a change was suggested that all attempts have proved failures, and we are justified in the belief that the disease will continue indefinitely to be known as glaucoma.

The symptom most characteristic of glaucoma is increased intraocular tension. This is sooner or later followed by diminution in acuity of vision, and by the time this symptom is observed the ophthalmoscope will reveal another important symptom—excavation of the optic papilla.

These constitute three important symptoms common to nearly all cases of the disease. Other symptoms will usually be found to characterize the different varieties of the disease.

In no disease of the eye is an early diagnosis more important, as after sufficient progress has taken place to permanently impair the vision, neither medicinal nor operative interference can bring the eye back to its normal condition.

Simple glaucoma is preceded by a prodromal stage, consisting of one or more attacks, during which vision is temporarily impaired. These prodromal attacks may extend over a period of from a few weeks to several years, each time the vision clearing up to normal, or almost so.

In acute inflammatory glaucoma we are without the prodromal stage; a fully developed glaucoma is found with the first attack. During an attack of acute inflammatory glaucoma the cornea and the vitreous are more or less cloudy and thus inter-

fere with the ophthalmoscopic examination. But usually other symptoms render the diagnosis possible.

But little difficulty will be found in differentiating the acute and the chronic cases, either in the simple or the inflammatory types.

In the chronic inflammatory type we have a history of slow development of prominent symptoms, gradual lessening of visual acuity. Refractive media may or may not be clear.

In simple chronic glaucoma the prevailing subjective symptom is gradual lessening of visual acuity. The increased tension may be almost or quite imperceptible. The excavation of the papilla may be so slight on first examination as to leave doubt as to whether it is the result of glaucoma, or only simple nerve atrophy. Even a second examination a few weeks later may be necessary to clear up the diagnosis. However, the halo so often found around the papilla is not present in simple atrophy; and again, the narrowing of the visual field while central vision remains good, or comparatively so, is not found in the latter disease.

Difficulty may be encountered in differentiating primary acute glaucoma and hemorrhagic glaucoma, especially where the hemorrhage has been slight and where hemorrhages have not been observed previous to the glaucomatous attack. Also serous iritis might be mistaken for acute glaucoma.

An acute secondary glaucoma due to an intraocular tumor might be diagnosed as acute glaucoma. In fact, in dealing with glaucoma many obstacles are met with in the diagnosis. Once the diagnosis is made, treatment demands our whole attention.

Medicinal treatment is no more than palliative, and should not be expected to do more than ward off a threatened attack, or cut short one already existing. All mydriatics have a tendency to increase the tension, and may serve to bring on an attack when there is the slightest tendency toward glaucoma.

Myotics, especially sulphate of eserine, on the other hand, lessen the tension, and while its effect is temporary, it is often an important adjunct in combating the disease.

The only curative means yet known to the profession is an operation, the principal one being iridectomy, first performed by von Graefe in 1857. The operation should consist in the removal of not less than one-fifth of the whole iris, and great care should be taken to see that the portion removed extends well back to the ciliary muscle, and the success or failure of the operation will, in many cases, depend upon how well this detail of the operation is carried out. The manner in which the incision is made

also plays an important rôle in iridectomy for glaucoma. The incision should be made in the sclera at least one millimeter from what seems to be the corneo-scleral junctions in the upper quadrant, the utmost care being taken, of course, not to wound the ciliary body. The benefits derived from an operation of this kind may be twofold: in the first place, it makes possible the removal of the iris close to the ciliary body, and also gives us a scar in tissue quite different from that of the cornea, one that will more readily permit of filtration of the intraocular fluid. A healthy wound in the cornea will heal within less than one-half the time of a similar wound in the sclera, and when it has healed the scar tissue will be less porous and permit of but little, if any, filtration from the interior of the eye. If an iridectomy has been performed without the results hoped for, a careful examination may reveal a failure to get that portion of the iris next to the ciliary muscle removed, or the scar may show that the incision was made in the cornea, rather than well into the sclera. If this should be the case, extra care should be taken in a second operation opposite in position to the one just performed.

Simply puncturing the cornea will temporarily lessen the tension, but no permanent benefit has been reported from this operation.

The best results from iridectomy for glaucoma are obtained in the acute inflammatory variety. If properly performed, the prognosis is very favorable. If it be during the first attack, the eye is most likely to be restored permanently to its normal condition. However, after several attacks have occurred and the vision has failed to regain its normal acuity, the prognosis is not so favorable, yet the operation is none the less indicated. If simple glaucoma is recognized during the prodromal stage, the operator may hope for as favorable results as in the acute inflammatory variety.

It is in simple chronic glaucoma that the operation fails most often to produce a cure. In fact, about all that may confidently be expected is to arrest the disease.

Since von Graefe first performed the iridectomy for glaucoma, many substitutes and many modifications have been offered. But De Wecker's sclerotomy, Hancock's cutting of the ciliary muscle, and more than a dozen other substitutes, all proposed by able men, have either proved failures, or are accomplished with more or less objectionable features.

Jonnesco recently came forward with his excision of the superior cervical sympathetic ganglion. As to the virtues of this operation no one is yet prepared to say. At present it seems we

are justified only in performing the operation when other operative measures have failed. The removal of this ganglion does, we have no doubt, result in reducing the intraocular tension in a certain percentage of cases, and in some has produced what seems to be a permanent cure. And it is to be hoped that more will come of this operation than just at present seems probable.

OVULATION AND MENSTRUATION.

BY Q. W. HUNTER, M.D., LOUISVILLE, KENTUCKY.

The question as to whether or not, in the human female, there is any connection between the processes of ovulation and menstruation—*i.e.*, whether they are interdependent, or bear a distinct relation to each other—has been much discussed at various times, but there yet appears no consensus of opinion, and as a consequence no satisfactory conclusion has been reached. The literature of the subject shows that numerous painstaking examinations, post-mortem and otherwise, have been made, that much experimentation has been undertaken, followed by the usual amount of theorization, with the view of positively determining whether menstruation in the human being is dependent upon or otherwise directly connected with the process of ovulation; but beyond confirming the well known and long established fact that the two processes may and oftentimes do occur synchronously in the *genus homo,* nothing new appears to have been evolved.

There is much to be said in a theoretical way upon either side of this question, and good arguments can be produced in support of theories both pro and con, but something more tangible than theory alone is necessary upon which to base logical conclusions. And this fact may go far toward explaining why no definite solution of the problem has even been evolved, as to the probable relations existing between the phenomena of ovulation and menstruation, there being an abundance of theories which are unsupported by sufficient reliable data to accurately establish such relationship, at least in the *genus homo.*

Observations in the plant and animal kingdoms furnish hypotheses of engaging interest, but when these observations are extended to the human species and the same line of reasoning pursued, the contradictions are so frequent and so flagrant that one immediately becomes skeptical as to the reliability of the data thus secured. As is well known, some of the plants appear to be bisexual, like the ameba itself, while others require intermingling

of the sexual principles for reproduction of their various kinds and species; in other words, admixture of the fecundating principles, as in the animal kingdom, is necessary for reproduction.

Observation in the animal kingdom shows that the female will tolerate approach of the male only at certain intervals—*i.e.,* during the œstrum, that period during which ovulation occurs; if she be not impregnated before the termination of that period, perhaps five days on the average, the attentions of the male will not be received until appearance of the next œstrum, there being an indefinite interval (about six weeks) between these periods. If she be impregnated, of course no further periods of heat occur, nor will the approach of the male be tolerated, until the next œstrum after parturition.

The foregoing rules hold true in all animals of which the writer has knowledge, with the possible exception of some varieties of our simian ancestors. As will be remembered, some varieties of the monkey menstruate, with more or less periodical regularity, as does the human female.

Again, in the animal kingdom the male makes no attempt to approach the female (sexually) except during the œstrum. The most plausible explanation of this is that the female menstruates coincidentally with ovulation, and that the male is attracted to that particular female to the exclusion of others (*i.e.,* those not in heat) by his olfactory sense. As a matter of fact, if a strange male be turned in with a herd of cows or flock of ewes, for instance, and there be only one female in the entire lot which is at the time ovulating, or undergoing the period of heat, the male will soon discover and single her out from the balance of the herd or flock, and no attention will be devoted to the others until her needs have been amply satisfied. If there then be no others entering or undergoing the œstrum, the male will peaceably mingle with the balance of the herd or flock until such time as by the sense of smell another female in heat is detected, when the foregoing procedure is repeated, and so on until the entire number have been served. In a flock of a hundred ewes the writer has known one male to impregnate twenty females in a single day (rather during twenty-four hours), as evidenced by that number of lambs being born within twenty-four hours time.

Observations such as those just narrated naturally lead to the conclusion that ovulation and menstruation invariably occur simultaneously in the animal kingdom, and that they are dependent upon each other, as in ninety-nine instances out of a hundred union of the sexes during the œstrum is productive of offspring. On the other hand, forced union of the sexes, which has occa-

sionally been accomplished experimentally, when the female was not in heat, was devoid of results.

If the female animal ovulated and did not at the same time menstruate, the male would not be attracted. If she menstruated without simultaneous ovulation, and received attention of the male, as a matter of course impregnation could not possibly follow the coitus. As already indicated, the instances are extremely rare in which impregnation fails to follow when the male is received within the specified period of heat. In those cases where failure results, it may be the coitus takes place during the first day of the œstrum, thus perhaps being too early for the ovum in its descent to have reached the uterus to receive the spermatozoön; or through human agencies or otherwise the coitus may have been deferred until too late in the œstrum, the ovum having already passed beyond the uterus toward the external genitalia, and thus impregnation in either case of that particular ovum being impossible.

In the animal kingdom the writer seriously questions if impregnation ever occurs except in the normal and natural place, viz., in the cavity of the uterus itself; in other words, he has reason to believe that extra-uterine pregnancy does not occur in animals. In the human being extra-uterine pregnancy is not uncommon, which has led to the supposition that impregnation occurs more often than elsewhere in the Fallopian tubes, and that this is the normal and natural place for union of the ovum and spermatozoön to take place, a deduction which in the opinion of the writer is entirely erroneous and unwarranted.

Menstruation has been believed to originate primarily in the ovaries, and that the ova are thereby transported, with the aid of the ciliæ of the ductus Fallopii, to the uterus; it has been presumed to originate in the Fallopian tubes; and many believe it to originate in the uterus. The exact cause and origin have been the source of much speculation and theorization, but whether any theory thus far promulgated be or be not correct has little to do with our present purpose; it is sufficient to state that the human female possessed of uterus, Fallopian tubes, and ovaries intact begins menstruating between the ages of eleven and sixteen years, and continues to do so at periods of twenty-eight days until advent of the menopause, unless interrupted by natural or artificial causes. This is the rule, but there are many exceptions—*e.g.*, infants and children under the age of three years sometimes menstruate; women have been known to menstruate with more or less regularity at the age of sixty and even seventy years; menstruation not infrequently continues after both the ovaries and

Fallopian tubes have been completely emasculated surgically; moreover, menstruation has been known to occur in women whose ovaries and tubes were congenitally deficient or entirely absent; and occasionally a pregnant woman continues to menstruate during almost the entire period of uterogestation.

Ovulation, on the other hand, in the human subject at least, and if the writer is not mistaken the same is true in animals, may and does occur at any age, from the cradle to the grave. It has been observed in post-mortem examinations upon still-born infants, as well as in women who have succumbed to the inevitable at the advanced age of eighty-six years. Cases of pregnancy are recorded in young girls before establishment of the menstrual function, indicating that ovulation occurs independent of menstruation, and that impregnation is in no way dependent upon the process of the catamenial flow. *Per contra,* however, the writer is unaware of a single instance in which impregnation has followed coitus where the female had passed the climacteric, although, as has been shown, there may have been no cessation of ovarian activity.

If it be true, however, that there exists no intimate relationship between the phenomena of ovulation and menstruation, how can the discrepancies already noted be reconciled? And, further, how can be explained the more frequent occurrence of impregnation following coitus in the *genus homo* at least within seven days after cessation of the menstrual flow than at any other period? The writer states without any hesitation that observation proves this to be true, although he is not unmindful of the fact that other and perhaps more competent observers may not agree. It has been taught that when the Graafian follicle has ruptured, thus liberating the ovum, the descent of the latter from the ovary to the uterus through the ductus Fallopii requires from three to ten days; that the ovum may be arrested in the uterus and retain its vitality or power of being impregnated for a longer or shorter period according to circumstances, condition of the uterine mucosa, etc., then if not impregnated by the sperm cell it passes outward through the cervix uteri into the vagina and is destroyed; that from the time the ovum leaves the uterine cavity in its downward descent until rupture of another Graafian follicle, and consequently a repetition of the process, the woman cannot become impregnated, as there is no ovum within reach of the male fecundating principle. Presuming rupture of the Graafian follicle to be coincident with onset of the menstrual flow, that no ova were liberated except at this time, would make easy the explanation as to why impregnation occurred most often immedi-

ately following cessation of the catamenia. But again, the exceptions to the rule are numerous, and observation proves that in the human female impregnation may occur at any time before or after the menstrual period, showing that ovulation takes place independent of menstruation. That impregnation may follow coitus without menstruation ever having taken place is also proven by facts already cited.

Rules which appear to work out satisfactorily in animals when applied to the *genus homo* are oftentimes found ineffective, the exceptions being so numerous that accurate conclusions cannot be formulated. In the animal kingdom ovulation and menstruation seem always to occur synchronously and to be interdependent, while in the human being there appears to be little relation between the two processes, inasmuch as either may occur independently.

A CASE OF CONTINUED DEVELOPMENT OF THE FETUS IN UTERO, AFTER RUPTURE OF THE MEMBRANES AND ESCAPE OF THE LIQUOR AMNII.*

BY H. W. CHAPMAN, M.D., WHITEHALL, ILL.

The function of reproduction is one that is full of the greatest interest to every medical man, and with which he must be more or less intimately connected during the whole course of his professional life.

I shall make no effort to elaborate the physiology of this subject, but will briefly mention merely the portion upon which the report of my case depends most immediately for its foundation.

The amnion is formed of the inner lamina of the external serous layer of the blastodermic membrane, and together with the chorion forms the membranes which envelop the fetus during intra-uterine life. It surrounds the entire fetus, being connected with the integument at the umbilicus, and forms the outer covering of the umbilical cord. According to some authors it secretes, and to others merely transmits, by endosmosis from the uterus of the mother, a fluid consisting of water, albumin, hydrochlorate of soda, phosphate of lime, lime, and incidentally meconium and probably urine. This fluid surrounds the entire fetus, which floats in it, and from which it receives nourishment and protection.

The amount of fluid increases up to the end of the fifth or sixth month, at which period it reaches the amount of 900 to

*Read before the Illinois State Medical Society, April 29, 1903.

1000 cubic centimeters. From this time on it gradually decreases until the end of pregnancy, when there remains about 480 cubic centimeters.

Destruction of the integrity of the membranes enclosing this fluid is usually soon followed by the death or expulsion, or both, of the fetus.

The case which is here reported, having taken a different course, becomes of interest.

Mrs. A——, nullipara, married between four and five months, good family history and good health, had her last catamenial period March 25, 1879. On the 5th day of July following she was taken with a severe dysentery. July 7 at 8 P.M., while lying down, there was a sudden gush of water slightly stained with blood from the vagina, having the appearance and odor of amniotic fluid. I was with the patient almost immediately, and before anything had been disturbed. From the clothing saturated the amount was estimated to be at least 480 cubic centimeters. Upon examination the os was found to readily admit the tip of the index-finger.

Patient was kept in bed and the supposed inevitable miscarriage awaited. On the following day there was retention of urine, which was relieved by the catheter. On the day following there developed a cystitis, probably because this case occurred before the days of antiseptic surgery. This subsided rapidly, however, as also did the trouble in the bowels, and in a few days the patient was attending to her household duties as usual. From the time of the rupture of the membranes and continuing until the termination of the case, there was a continuous watery discharge from the vagina; the amount never large nor varying much in quantity. Previous to this there had never been any similar vaginal discharge.

Soon after convalescence she went away on a visit of a few days or a week in excellent health and spirits. The appetite was good, abdomen perceptibly enlarging, and patient filling out all over after the manner of women with whom pregnancy agrees. Beyond the slight watery discharge from the vagina there was nothing unusual until the 14th of August, when, while straining at stool, "something had tried to pass from her," which she immediately replaced with her finger and sent for me.

Upon examination a loop of umbilical cord about seven centimeters long was found protruding from the uterine os, which was dilated to a sufficient extent only to permit the extrusion of the cord. Pulsation in the latter was very distinct, a little irregular, ranging from 108 to 120 per minute, while that of the patient

was 80 per minute and regular. There had been no pains nor any increase in the amount of water discharged from the vagina since the 7th of July preceding.

August 15 was feeling well and about her room. At 6 P.M. some slight pains commenced, which gradually grew stronger until 1 A.M. August 16 a well developed fetus, not less than four months old, measuring 27 centimeters in length, was expelled, forty days from the time of rupture of the membranes. Quickening had not taken place, but the cord continued to pulsate for several minutes.

The placenta was delivered immediately, and was apparently healthy; there was no water, and but slight hemorrhage. There was nothing eventful in the convalescence.

At the meeting of the Berlin Medical Society, held May 13, Dr. Paul Sommerfield read a paper upon sanosin in the treatment of consumption. He showed that a number of patients, mostly workingmen, had been cured of consumption, and said they were treated without interference with their work. The use of sanosin prevented coughing, fever, and night sweats, and resulted in the patients gaining in weight. Even in severe cases of consumption the progress of the disease has been arrested. The remedy was discovered by Dr. Robert Schneider. It has been stated that Dr. Schneider will introduce sanosin at a new consumption hospital to be opened in Chicago. The cure is not by a serum, but by a vapor, administered by inhalation and generated over a simple alcohol lamp from a powdered mixture of Australian eucalyptus and sulphur.—*Philadelphia Medical Journal.*

The first dispensary for tuberculosis in Spain was opened in Madrid on March 30. The founder is Dr. Jose Berdes Montenegro. The Queen of Spain, who was attended by the Duchess de San Carlos and the Duke de Sotomayor, was present on the occasion. The alcalde and the governor of Madrid were also present. The maintenance of the dispensary is provided for by grants from the municipality and other public bodies. The dispensary consists of four departments—one for the disinfection of clothes; one for the examination of patients, which includes the appliances requisite for the inspection of the throat and nose, as well as every kind of instrument for the examination of the lungs and heart; one for the employment of *x*-rays; and one equipped as a clinical laboratory.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE VALUE OF CONGRESSES.

The age of conventions seems to be more or less on the wane. The utility of many of the gatherings by which people are brought together has come to be questioned, and the reflective and observant onlooker has come to see that many of these aggregations are dominated purely by a spirit of frivolity. People of similar taste and occupation come together for a so-called good time, and serious occupations are overborne by trolley-rides and picnics. The social spirit seems the most persistent one among such gatherings.

This is not perhaps true of medical congresses. The work of the medical association is one which is productive of real good. They increase the incentive to work at home by providing audiences, to which the worker may communicate his labors. The real work of the investigator, however, is done privately. The laboratory, the study, the hospital, are the actual places in which the real work of scientific advancement is achieved.

A commentary upon conventions is furnished by a consideration of the last international medical congress held in Madrid. The original idea of the international congress was magnificent. Investigators and original research workers were to be brought in contact with the leading practitioners from all parts of the world and there to exchange experiences, and give their fellow workers the benefit of their hard-earned knowledge. This idea, however, has not had its expected fulfilment.

The science of medicine during the past few years has sharply divided into specialties. Those practicing one of these specialties are therefore apt to prefer attending a special congress. These special congresses have been notably successful. Long, tiresome papers have yielded to demonstrations, and in other

ways the pursuit of the subject desired has been achieved with greater directness and exactness.

At the recent meeting in Madrid too much was attempted. Not medicine alone was discussed, but all kinds and conditions of people were invited to have their say. Dentists, electricians, the promoters of hygiene, the makers of instruments, all had a chance to take part. It was also shown at Madrid that very few cities can take care of seven thousand people satisfactorily. Hotel accommodations were insufficient, most of the delegates having to find what accommodations they could at exorbitant rates. It was found impossible to do good work in the sections, as the rooms were crowded often by tourists and others impelled by transient curiosity. The greatest drawback perhaps to the success of such a congress as this was the fact that no common language was spoken. Each delegate used his mother tongue, and the erection of the edifice of medicine under these circumstances resembled the building of the tower of Babel. It would have been better for the Spaniards to have had a congress of all Spanish-speaking people, and the English-speaking ones another.

It seems therefore doubtful whether such high and magnificent undertakings as international congresses are not yielding to the general spirit of deterioration and becoming more or less simple occasions of gathering together those in need of an outing, rather than those desiring to exchange confidences on lofty and intricate matters of scientific interest. If such a conviction is slowly gaining credence, it will not perhaps do any greater harm than to show us that the true kingdom of the mind is within us; and that truth will easily find methods of diffusing itself apart from the hand-shaking multitudes or the crowded lobbies of hotels.

EDITORIAL NOTES.

Clay Modeling as an Aid to the Study of Osteology.

A method of clay modeling as an aid to the study of osteology has been inaugurated at the University of California by Dr. Robt. Moody, one of the instructors in anatomy at that institution. Dr. Moody describes the method in the April number of the *Bulletin of the Johns Hopkins Hospital.* The apparatus used consists of a board and two modeling tools. The board is a smooth piece of wood, the dimensions being 24 by 20 inches, which is covered by paraffin to prevent the clay sticking or the board from warping. Models of bones are made while the clay is in a plastic con-

dition. Twenty-four hours a week for seven weeks are given to this work. The general adoption of this method of teaching osteology is to be commended, owing to the fact that medical students usually find the study of the bones an exceedingly difficult one.

Rheumatism Cured by Bee Stings.

The popular remedy for curing rheumatism by the stings of bees has recently found an advocate in Dr. Perc, of Marburg, Germany. Perc claims to have tested the treatment and demonstrated its efficacy in 500 cases. He found, according to his investigations, that if a bee stings a person suffering from rheumatism the stung part does not swell until the bee poison has been frequently introduced, when the pain vanishes. The mode of procedure followed by Dr. Perc is to allow his patients to be stung at first by a few bees, gradually increasing the number. It is doubtful if this method will ever become very popular with persons suffering from rheumatism, for in this instance the remedy is such a heroic one as to be worse than the disease.

Hotel Menus for Invalids.

Quite recently certain hotels in England have inaugurated a plan whereby invalids residing in them can find dishes which are more suitable to their tastes and needs than the ordinary fare. The menu comprises broths, vegetable purées and soups, light dishes such as souffles, simple puddings, also jellies, lemonade, and the various cereal preparations. The system is one highly to be commended, and it is to be hoped that the hotel authorities of this country will adopt this or some similar method of providing invalids with something they can eat with relish.

The Michigan State Medical Society.

The revised scheme of membership resulted in the largest number of members attending the last meeting of this society in Detroit that has ever been present at any meeting. The scientific interest of the meeting was marked, and the society is an example of what such organizations can become under wise and capable direction. Dr. W. F. Breakey, of Ann Arbor, is the newly elected president.

ITEMS AND NOTES.

Dr. James Webber, an English centenarian surgeon, died at Barnstaple on April 1, in his 101st year.

The Michigan State Medical Society held its annual meeting in Detroit on June 11 and 12, Dr. A. E. Bulson, of Jackson, Mich., presiding.

Mabini, the former minister of foreign affairs of the Filipino government, and a member of Aguinaldo's cabinet, died recently in Manila from cholera.

Governor Odell of New York has signed a bill making it a misdemeanor to distribute samples of drugs or patent medicines in such a way that children may get them.

The fifteenth International Medical Congress, which is to be held in Lisbon, Portugal, in April, 1906, will have as president Dr. Costa, and as general secretary Dr. Bambara.

According to the *London Times,* Kunwar Sir Ranbir Singh, uncle to the youthful Maharajah of Patiala, has made a free gift of his residence at Kasauli to the Pasteur Institute there.

Dr. B. A. Cahrrin, director of the Laboratory of Experimental Medicine of the College de France, has just been appointed professor of pathology in the chair recently established in that institution.

Owing to the dread of smallpox in St. Paul, Minn., the commissioner of health, Dr. Justin Ohage, has requested the banks to fumigate their greenbacks to avoid the conveyance of contagion by dirty bills.

Four beds at the Roosevelt Hospital, New York City, have been endowed in honor of Dr. Abraham Jacobi, until last year the professor of children's diseases at the College of Physicians and Surgeons.

The State Board of Medical Examiners of South Dakota will hold its regular semiannual meeting at Sioux Falls on July 8 and 9. Licenses to practice in South Dakota will be granted only after examination.

THE State Board of Health of Kentucky has recently appointed a committee to investigate the sanitary condition of railroad coaches, as the precautions against the spread of disease are not considered as complete as they should be.

A LARGE modern hospital and recuperation station is to be built in the mountains near Maribeles, at an elevation of about 2000 feet. It is intended to provide here a general station where officers and men suffering from the effects of tropical service may be sent to recuperate.

CHOLERA has attacked troops on the Island of Mindanao, where seven deaths were reported April 16. Many suspected cases are reported. It is supposed that the disease was contracted near Bacalod, which was captured April 8. The sick have been sent to the hospital at Camp Vicars.—*Exchange.*

AN ordinance is in preparation in Louisville, Ky., at the instance of Health Officer Allen, which provides for the periodical examination of schoolchildren by compe'ent physicians in order to ascertain if a child is in the incipient stage of any disease, so that it may be sent home before any danger of infection arises.

A PROMINENT manufacturer of wines in Berlin has been found guilty of adulterating his manufactured product and sentenced to pay a fine or be imprisoned. Witnesses from among his employees testified that he used tannic acid, gelatin, and isinglass, mingled with Greek wines of the cheapest grade.—*Exchange.*

ACCORDING to the *Gazette Médicale de Paris,* there are at the present time five men in Paris over 100 years of age; it is noteworthy that none of these Methuselahs is married. There are 531 nonogenarians, 85 of whom are within a few months of completing their century of life. Of octogenarians there are no fewer than 10,617.

THE Charles Frick Research Fund has, by the beneficence of some citizens, been founded at the University of Maryland, the object being to found a memorial of this great investigator, who lost his most promising life forty-three years ago from diphtheria. It is an appropriate way to perpetuate his memory by reviving and perpetuating in the university where he gained his fame those researches in diseases of the blood, urine and fevers which immortalized him a half-century ago.—*Journal of the American Medical Association.*

Work will be begun on the first building of the Rockefeller Institute on August 1, at the northwestern corner of Sixty-second street and Avenue A. This will be the main building, and the institute when completed will occupy the blocks bounded by Sixty-fourth and Sixty-seventh streets, Avenue A, and the East River.—*New York Medical Journal.*

The German war department has issued orders that in case of suspected poisoning from meat the serum test shall be applied, as it has been found that the serum of persons convalescing from botulismus has marked agglutinating properties for the enteritis bacteria. The results of this test may enable a retrospective diagnosis to be made even several days after recovery.—*Exchange.*

From Chicago come reports of the condition of Cook County Hospital, which have caused a great deal of comment. The accommodation appears to be altogether inadequate, and the overcrowding and lack of sufficient isolation wards render the place a positive menace to health. Chicago is surely rich enough to see to it that such a condition shall be remedied without delay.—*Exchange.*

Dr. Justin Herold, of 325 E. 87th street, New York City, recovered a verdict of $12,158 against the Metropolitan Street Railway Co. for injuries he received three years ago in a collision while a passenger on one of their cars. The case was tried successfully before Judge Leventritt and a jury, in the Supreme Court. Dr. Herold is the well known author of "Herold's Legal Medicine."

Radica, the living half of the Hindu twins, formerly with Barnum's circus, separated by Dr. Doyen when the other twin fell mortally ill, has just returned to Paris from the Riviera, fully recovered from the operation and threatened consumption. She has been adopted by some nuns, who have placed her in an orphanage in the Latin quarter. She is now quite accustomed to individual life.—*Exchange.*

From Berlin comes the news that the investigations which have been carried on by the government relative to the tropical worm disease which has attacked 20,000 miners of Westphalia have shown that only those who are shut out from the sunlight are affected. The disease frequently proves fatal. One hundred and fifty doctors especially trained have been appointed by the government to combat the condition.—*American Medicine.*

THE action of the House of Delegates as regards the Code was distinctly expressive of the sentiment of the medical profession of the country. Local conditions in the State of New York were not taken into consideration. There was no question of expediency. What was done by the House of Delegates was manifestly that which in its judgment was best for the profession, without reference to incidental or extraneous considerations. The final result could not have been better devised to solve the problems awaiting adjustment in the State of New York, as well as the problems of medical organization of our entire country.—*Buffalo Medical Journal.*

MR. JONATHAN HUTCHINSON, a former president of the Royal College of Surgeons in London, Eng., who has recently made an exhaustive investigation in India as to the cause and prevention of leprosy, has written to the *London Times* on the subject. He is of opinion that the Catholic fast days are responsible for a large number of cases of the disease, and says that he has observed that leprosy increases in proportion to the success of Catholic missions. He quotes the census returns in support of his theory. He also believes that the disease is non-contagious, as the Indian Jain, who is vegetarian, is exempt, while Catholics suffer fearfully.—*New York Medical Journal.*

THE Supreme Court of Pennsylvania recently rendered a decision confirming the findings of the lower court in regard to its refusal to grant a charter to the Eddyites. The Supreme Court held that the State regulates the practice of medicine and requires certain qualifications in its practitioners, while according to the Eddyite teaching no knowledge of anatomy, physiology, or pathology is required to treat disease, the fundamental principle of the Eddyite teaching being that disease has no real existence. It was therefore held that the courts cannot furnish a charter sanctioning methods and practice at variance with the statutes, with public welfare, and with sound common sense.—*American Medicine.*

THE Philippine government is considering the badge system of controlling opium eating in the islands. The Taft government has come to the conclusion that the traffic in the drug must be restrained, and that the practical way to do it is to grant concessions for its sale, and then hold the concessionaires strictly to account for their transactions. They would be allowed to sell only to persons addicted to opium and confirmed in the habit, and

would be obliged to report the number of persons whom they supplied and the amounts sold to each individual daily. The syndicate that wants the concession consists mainly of Chinamen of large capital, and they are urging the adoption of the badge system of identifying opium consumers. This system is in vogue in China and proves of great service there in regulating the traffic, and shows just how much of the drug is used and can be taxed. The concessionaires would, under heavy penalties, be restrained from selling to any badge wearer more than the stipulated amount shown on the badge. The opium to be sold is that which has been boiled and prepared, and the syndicate would pay for the license to manufacture and also for dealing in the drug in a retail way.—*Philadelphia Medical Journal.*

Certainly up to the present time few more precious relics of ancient literature have been found preserved for us by the perfection with which the Egyptians carried out their burial rites than the magnificent poem of Timotheos of Miletus, contained in a papyrus found last year in a sarcophagus beside a body at Abusir. Such a subject may perhaps be deemed extraneous to the contents of a medical journal, but that is hardly so in such a special case as this. Any really elevated and exquisite production of the poetic fancy such as this is calculated to be a mental consolation and thus a physical assistance to any jaded, overworked citizen subject to the tension of modern life, as well as to the actual invalid. To the medical man who turns from his weary round for some change of thought a masterpiece such as this, if he still retains his scholarship, will be a literary pleasure, and for the benefit of those who have forgotten their Greek it may be expected that a translation will soon be forthcoming. It would be singular, if it is true, as has been alleged, that the poetic genius of the race shows sinister signs of diminution in recent years, that the balance should be restored by the recovery of masterworks of the classic muse. Within something like a decade the lost poems of Herondas, Bacchylides, and now the great ode of Timotheos, have been restored to us, and it is not too much to anticipate that these are but precursors of a greater harvest.—*Lancet.*

NEW PUBLICATIONS.

INTERNATIONAL CLINICS.

The new volume of this interesting periodical contains the usual quota of useful and interesting matter. The contributors include many illustrious names in medicine. Among the papers may be mentioned Dr. Osler's contribution on aneurism of the descending aorta; a very interesting lecture by Jonnesco, of Bucharest, on sympathectomy for Basedow's disease; one by Dr. T. H. Manley on the greater importance of organs in right as compared with the left lateral half of the abdomen. Much medical philosophy is contained in Dr. King's article on functional reversion. Nor less noteworthy is the general summary of therapeutics and medical progress, which makes this series include the special advantages of the year-books.

International Clinics. A Quarterly of Illustrated Clinical Lectures. By Leading Members of the Medical Profession Throughout the World. Volume I; Thirteenth Series, 1903. Philadelphia: J. B. Lippincott & Co.

THE PRACTITIONER'S GUIDE.

This is a dictionary of medicine in compact form, the object of which is to afford the busy practitioner a book of reference to which he can resort at any time while engaged in the active pursuit of his profession. The work emanates from the other side of the Atlantic, and is edited by leading authorities in medicine and surgery. The arrangement of the subject-matter in alphabetical order makes reference an easy task. This is a work the general practitioner will find convenient to have on his table, as the matters to which he may refer are clearly and concisely elucidated, and the treatment in each case is admirably summarized.

The Practitioner's Guide. By J. Walter Carr, M.D., London, Physician to the Royal Free Hospital; T. Pickering Pick, F.R.C.S., Consulting Surgeon to St. George's Hospital; Alban H. G. Doran, F.R.C.S., Surgeon to the Samaritan Free Hospital; and Andrew Duncan, M.D., Lecturer on Tropical Medicine at the London School of Tropical Medicine. 1902. London, New York, and Bombay: Longmans, Green & Co.

THE SURGERY OF THE HEAD.

The title of this work scarcely connotes its contents. It deals with a variety of subjects more or less connected with the head, yet not confined to cerebral surgery nor neurological science. It begins with a consideration of malformations of the head, face, and mouth; then passes to injuries of the face and head; then deals with the brain in the matter of thrombosis, tumor, and fractured skull. The parotid gland is next considered, and the book ends with a chapter on surgery of the orbit. Within its pages a vast quantity of clinical study has been incorporated, and the book is one of great interest and value to the practitioner. It is copiously illustrated, and written in a clear and lucid style.

Surgical Emergencies. The Surgery of the Head. By Bayard Holmes, B.S., M.D. New York: D. Appleton & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Prevention of Chloroform Accidents.

Feilchenfeld (*Centralblatt f. Chir.,* No. 7, 1903; *British Medical Journal,* April 25, 1903), who about three years ago first advocated the frequent administration of tincture of strophanthus in five-drop doses for some two or three days before an operation under chloroform, with the object of strengthening the heart and of counteracting the effects of prolonged mental excitement and anxiety, publishes some further and more detailed notes on this subject. He insists on the importance of frequent examination of the heart before the administration of chloroform, even though this organ at the primary examination be quite sound. In the case of a strong and robust man preliminary strengthening of the heart is quite unnecessary. In cases of nervous irritability of the heart indicated by dulness of the cardiac sounds, by a somewhat diffused and indistinct apex beat, and by a small and very rapid pulse, the author would give small doses (not more than five drops) of tincture of strophanthus and tincture of digitalis three times daily for some days before the time fixed for the operation. The good effects of such treatment are shown by a reduced pulse-rate, less mental depression and anxiety, improved appetite, and good sleep. The pulse-rate, it is stated, should be reduced to 80 at the highest before a subject of cardiac irritability can be placed under chloroform without risk.

In a second group of cases in which there is distinct evidence of muscular degeneration, varying from slight forms of muscular weakness to grave myocarditis, the author would endeavor to fortify the flagging heart and to improve the rapid and irregular pulse, and with such object in view would substitute for the first described method of treatment, warm baths, carbonic acid baths, and injections of strychnine, the administration of digitalis being continued in the form of infusion. In cases of this kind ether should be used as the anesthetic in preference to chloroform. The most difficult cases to deal with are those of hypertrophy of the cardiac muscles. These need careful prophylactic treatment, and the action of the anesthetic should, the author states, be assisted by an injection of morphine, at the seat of operation.

In conclusion, it is pointed out that nothing can be done by preliminary treatment to prevent the great danger attending the administration of chloroform in cases of severe myocarditis.

Germicidal Action of Alcohol.

C. Harrington and H. Walker (*Boston Medical and Surgical Journal,* May 21, 1903) have after a series of experiments reached the following conclusions:

Against dry bacteria absolute alcohol and ordinary commercial alcohol are wholly devoid of bactericidal power, even with twenty-four hours' direct contact, and other preparations of alcohol containing more than 70 per cent by volume are weak in this regard, according to their content of alcohol—the stronger in alcohol the weaker in action. Against the commoner, non-sporing, pathogenic bacteria in a moist condition any strength of alcohol above 40 per cent by volume is effective within five minutes, and certain preparations within one minute. Alcohol of less than 40 per cent strength is too slow in action or too uncertain in results against pathogenic bacteria, whether moist or dry. The most effective dilutions of alcohol against the strongly resistant (non-sporing) bacteria, such as the pus organisms, in the dry or moist state, are those containing from 60 per cent to 70 per cent by volume. Unless the bacterial envelope contains a certain amount of moisture it is impervious to strong alcohol; but dried bacteria when brought into contact with dilute alcohol containing from 30 to 60 per cent of water by volume absorb the necessary amount of water quickly, when the alcohol can reach the cell protoplasm and destroy it. Provided the skin bacteria in the deeper parts can be brought into contact with disinfectants, alcohol of 60 to 70 per cent strength may be depended upon usually, but not always, to destroy them within five minutes.

The Mortality of Appendicitis.

A. J. Ochsner (*Medical News,* May 2, 1903) makes the following observations on the mortality of appendicitis:

(1) The mortality in appendicitis results from the extension of infection from the appendix to the peritoneum or from metastatic infection from the same source; (2) this extension can be prevented by removing the appendix while the infectious material is still confined to the organ; (3) the distribution or extension of the infection is accomplished by the peristaltic action of the

small intestines; (4) it is also accomplished by operation after the infectious material has extended beyond the appendix and before it has become circumscribed; (5) peristalsis of the small intestine can be inhibited by prohibiting the use of every form of nourishment and cathartics by mouth, and by employing gastric lavage in order to remove any substance of food or mucus from the stomach; (6) the patient can be safely nourished during the necessary period of time by means of nutrient enemata; (7) in case neither food nor cathartics are given from the beginning of the attack of acute appendicitis and gastric lavage is employed, the mortality is reduced to an extremely low percentage; (8) in patients who have received some form of food and cathartics during the early portion of the attack, and who are consequently suffering from a beginning diffuse peritonitis when they come under treatment, the mortality will still be less than four per cent if peristalsis is inhibited by the use of gastric lavage and the absolute prohibition of all forms of nourishment and cathartics by mouth.

Different Diagnosis in Disease of the Gall-bladder and Ducts.

G. M. Brewer (*Boston Medical and Surgical Journal,* May 14, 1903) says in common duct stone the calculus is found in 67 per cent of the cases in the duodenal extremity, in 15 per cent in the hepatic extremity, and in 18 per cent in the middle portion of the duct. One-half of all cases of common duct obstruction only are due to stone. In 70 per cent of the cases of obstruction located in the neck of the gall-bladder the pain is referred to the right subscapular region, in 10 per cent to the left subscapular region, and in 20 per cent to the precordia, sternum, right subclavicular region, or neck. The temperature chart in biliary infection is characterized by angularity rather than by curves, and by more or less prolonged periods of complete intermission. Jaundice is absent in from 80 to 90 per cent of all operative cases of gall-bladder or duct disease. Jaundice preceded by colic is practically always due to stone; jaundice without pain is practically always due to inflammation or new growths of the ducts or to outside pressure. The bile in all cases of cholelithiasis should be regarded and treated as an infected secretion. During the presence of calculous jaundice the sudden occurrence of acute epigastric pain, muscular rigidity, nausea, vomiting, and collapse, without leucocytosis, strongly suggests acute pancreatitis, occasioned by the presence of a stone in the diverticulum of Vater.

Indications for Extirpation of the Gall-bladder.

M. H. Richardson (*Medical News,* May 2, 1903) says that certain lesions in themselves demand removal of the gall-bladder whenever possible. Such are new growths and gangrene. Certain other lesions of the gall-bladder are better treated by cholecystectomy. These are contracted and inflamed gall-bladders, with thickened walls. All gall-bladders which do not permit easy and efficient drainage should be extirpated, for in such gall-bladders the risk of drainage is quite as great as the risk of extirpation. Drainage is preferable in the dilated and infected gall-bladder, which however is neither gangrenous nor to any great extent changed. As a rule, drainage rather than extirpation is demanded in acute cholecystitis with severe constitutional symptoms when the gall-bladder is dilated, or at least not contracted, and when it is not gangrenous. In chronic cholecystitis with dilatation and thickening of the gall-bladder, especially when a stone is impacted in the cystic duct, extirpation is the preferable operation unless the stone can be dislodged backward into the gall-bladder, in which case drainage is, if not preferable, quite as advantageous as extirpation. In simple gall-stones, without visible evidence of infection or chronic changes incompatible with complete restoration of functions, simple drainage of the gall-bladder is indicated. In chronic pancreatitis, whether associated with gall-stones or not, drainage through the gall-bladder is indicated.

Percussion of the Epigastrium as a Diagnostic Aid in Gastric Ulcer.

Dr. F. Mendel (*Münchener med. Wochenschrift,* No. 13) recommends in doubtful cases of ulcer of the stomach the following procedure:

With the percussion hammer light, short blows are struck on the tense abdomen. The most sensitive but normal person will not experience any pain at all, though in cases of gastric ulcer a point is soon reached where the lightest blow will cause intense pain. This painful area is of no aid in the localization of the ulcer, but undoubtedly proves the pathological change in the stomach. The vibration from the percussion stroke is transmitted in all directions, and reaches the ulcer even though it be situated on the posterior wall. As the lesion improves the zone of pain diminishes. In cases of fresh hemorrhage this usually harmless method should not be employed.

Congenital Tumors of the Kidney.

L. W. Strong (*Archives of Pediatrics,* May, 1903) says that histological comparison shows that these tumors resemble the embryonic Wolffian body. There is a continuous system of tubules and their derivative cell masses throughout the tumor.

The tubules are the primary mesothelial elements, and the cell masses are derived from them by retrograde metamorphosis.

The histological characteristics vary with the age of the part; the pelvic region is oldest and shows complete differentiation of mesenchyme and mesothelium; the metastases are youngest, and show, not transitions between mesothelium and mesenchyme, but an embryonic condition where all cells are alike.

Bilateral tumors are coincident and not metastatic.

Metastases may occur through the lymph-stream as well as through the blood-stream.

Treatment of Surgical Shock by Adrenalin.

E. Martin (*Medical Record,* May 30, 1903) says that adrenalin is the most powerful cardiac and vasomotor stimulant known. It is almost harmless, the lethal doses being probably much more than one hundred times as great as the dose ordinarily used to-day. In using it on patients who are septic, it should not be forgotten that it depresses the bactericidal power of the serum. In the laboratory he has been able to bring back to life dogs killed with ether after they had been, to all appearances, dead for fifteen minutes, and clinically he has been able by the introduction of from one to four cubic centimeters of adrenalin directly into the venous circulation in a 1-to-10,000 solution to rescue at least one desperate case from impending death.

Spontaneous Fracture of Stone in the Bladder.

Kapsamer (*Wiener klin. Wochenschrift,* No. 18) finds that only sixty cases of spontaneous fracture of stone in the bladder can be found in the literature, and that 90 per cent of these cases occurred in old men. He reports a case of a man seventy-four years old from whom he removed forty-nine particles of stone, which could be pieced together into ten complete original stones. These stones were composed of uric acid, and were all about the same size, showing a smooth fracture. The observer believes that the stones were fractured by the contraction of the bladder, and is supported in this view by five cases recorded in literature with analogous explanations.

MEDICINE.

The Action on Bacteria of Electrical Currents of High Potential and Rapid Frequency.

At a recent meeting of the London Pathological Society, A. Fonlerton and D. Kellas (*British Medical Journal,* April 25, 1903) read a paper on this subject.

In a former communication to the society at a laboratory meeting last year the authors gave the results of their earlier experiments, which showed that bacteria suspended in water could be destroyed by the discharge of currents of high potential and rapid frequency in an atmosphere of common air and close to the surface of the fluid. The bacterial emulsions were contained in ordinary glass tubes, through the bottom of which a length of platinum wire was sealed. The current used was one of from 2.5 to 5 amperes, the voltage varied from 35 down to 24, and the bacteria were destroyed after an exposure to the current of 10 to 45. The duration of time before sterilization of the bacterial emulsion apparently varied with the intensity of the current employed. The bacteria thus tested were B. typhosus, B. coli communis, B. prodigiosus.

Further experiments have now been carried out in order to determine the precise cause of the sterilization, and it has been found that if the experiments are carried out in an atmosphere of pure hydrogen the bacteria will in some cases survive exposure. It has also been found that the organisms are apparently unaffected when the discharge is sprayed over the surface of a growth on a sloped agar tube in an atmosphere of hydrogen. Further, it is found that when the discharge is sprayed over the surface in water, in an atmosphere of common air, under the conditions of the previous experiments, there is a rapid development of acidity in the fluid, due to the formation of nitrous and nitric acids from nitrogen peroxide formed by the discharge of the current in air. Under the conditions of the experiments the nitrous acid was rapidly changed to nitric acid; and it appeared that the germicidal action manifested was chiefly due to the latter substance, and it seemed that the solution of the nitrogen peroxide by the fluid was assisted by the electric discharge on the surface, the gas being carried down to the fluid, as it were, by the discharge. And it is not unlikely that with the discharge of such currents over the skin a somewhat similar penetration of the chemical products might occur. In any case, it seems as if the discharged current has very

little direct action on bacteria with exposures of moderate duration. The useful effect of the discharge of current in certain conditions when ulceration is present must be taken as being due, at any rate in part, to the germicidal action of chemical decomposition products formed in the air. It is possible that in morbid conditions, not apparently caused by parasitic infection, the favorable results sometimes observed might be in part due to the action of nascent and active nitrogen compounds penetrating the tissues in minute quantities. It is not improbable that the electrical discharge on the surface might favor the penetration of the skin by such bodies.

Some experiments were also carried out in which the discharge was sprayed over the bacteria in an atmosphere of carbonic acid; but the results are at present contradictory, and further experiments are in progress.

A Study of the Cases of Amebic Dysentery at the Johns Hopkins Hospital.

At a recent meeting of the American Medical Association, T. B. Futcher (reported in *Medical Record,* May 9, 1903) read this paper and gave the following summary:

(1) In nearly fourteen years 119 cases of amebic infection had been admitted to the Johns Hopkins Hospital. Of these 118 were cases of amebic dysentery or its complications, the remaining case being one of amebic abscess on the floor of the mouth. (2) Of the 119 cases 117 were admitted to the medical wards. During this time there were 15,817 medical admissions, the cases of amebic dysentery consisting of 0.73 per cent of the total. (3) Of the 118 cases of amebic dysentery the infection in 82 was apparently contracted in Baltimore, and in 13 in the State of Maryland outside of Baltimore, or a total of 95 cases contracted within the borders of Maryland. (4) The largest number of cases occurred in the third decade, 35 having developed between twenty-one and thirty years of age. The youngest was a child of two years and eight months, and the oldest a man of seventy-one. (5) A point of practical interest was the comparatively large number of infections in children under ten years. Eleven cases, or 9.4 per cent, occurred in the first decade, 6 of these developing in the first hemi-decade. (6) The disease was much more prevalent in males; the series was composed of 107 males and only 11 females. (7) There were 107 whites and 12 blacks, or a proportion of 9 to 1; the ratio of all admissions for all diseases in two races being 7 to 1. (8) A secondary

anemia of moderate grade occurred. A striking feature was the polycythemia in many cases. A moderate leucocytosis existed; that in cases with hepatic abscess being only a trifle higher than that in uncomplicated cases. (9) Hepatic abscess occurred in 24, or 20.3 per cent of the cases. Eight of these ruptured into the lung, producing a hepato-pulmonary abscess. In 15 of these cases that came to autopsy nine showed a single large abscess in the right lobe, and six presented multiple abscesses. (10) Perforation of the colon with peritonitis occurred in three cases. (11) Intestinal hemorrhage occurred in three cases. (12) Five of the cases were complicated by malaria, one by a strongyloides intestinalis infection, and two by typhoid fever. (13) The agglutination blood tests indicated that the disease was not associated with dysentery due to bacillus dysenteriæ Shiga. (14) A marked feature of the disease was its tendency to relapse, 19 patients being readmitted one or more times. (15) The mortality was high, 20, or 24.5 per cent, terminating fatally. (16) Quinine irrigations afforded the most satisfactory means of treatment.

The Etiology of Acne Vulgaris.

T. C. Gilchrist (*Journal of Cutaneous and Genito-Urinary Diseases*, March, 1903) has made an elaborate research into the causes of this affection. He has made the following summary of his results:

(1) Definite bacilli, which he has already named bacillus acnes, were present in all smears taken from 240 typical acne lesions from 86 patients. (2) Pure cultures of bacillus acnes were obtained from sixty-two lesions (chiefly acne nodules) from 29 patients, eighty-two cultures being sterile (about seventy of these were sterile because the proper media were not used), and the remainder showed either a growth of bacillus acnes mixed with staphylococcus pyogenes or epidermis albus, or the latter organism was pure culture. (3) Sections of an excised comedo, of an early acne papule, of an acne pustule, and of five acne nodules from six patients demonstrated the stages of the disease. The section from the acne nodules showed quite profound changes, extending deep into the corium, surrounding, in some nodules, a magnified and markedly hypertrophied follicle. The lesion was made up of masses of cells, many giant cells, plasma cells, which were very numerous in some nodules but not in others, their place being taken by lymphoid cells or connective tissue cells. Very many polymorphonuclear cells were also present, and were massed

in some sections so as to form miliary abscesses; numerous phagocytes were seen, and also many pigment cells, especially in one nodule, where they were in large numbers. The blood-vessels were numerous and dilated. In one section a large group of bacilli acnes were situated deep in the corium beneath the follicle, but in most of the section only a few small clumps or scattered bacilli were found. Some of the giant cells contained bacilli. (4) Bacilli acnes have been shown to be pathogenic in mice and guinea-pigs. (5) Bacillus acnes is present as a short, thick bacillus in the smears, but in culture it often becomes much longer and thicker, and in old cultures assumes distinct branching forms. It grows when planted *en masse* on acid glycerin agar, and forms a pultaceous, easily movable mass. (6) By the clumping of bacillus acnes by the serums of patients affected with acne vulgaris it is to be inferred that a specific toxic body derived from the presence of bacilli in the tissues is absorbed by the blood, resulting in the production of a specific agglutinin.

A Clinical Observation of Ninety Cases of Typhoid Fever with Four Deaths, with Special Reference to Therapeutic Fasting.

R. M. Harbin at the recent meeting of the American Medical Association (reported in *Medical Record*, May 9, 1903) read a paper under this title. The conclusions that he adduced were as follows:

(1) Fasting or a restricted diet is indicated because of pathological conditions. (2) Clinical facts indicate that emaciation occurs independently of the amount of food taken. (3) All severe cases should be subjected to fasting for twenty-four to forty-eight hours to relieve the active symptoms, which exhaust the patient more rapidly than the lack of food. (4) After a fast restricted diet of broth, diluted milk, etc., in definite quantities should be prescribed. (5) Gelatin prevents too rapid emaciation in certain cases and renders hemorrhage less liable. (6) The cold bath, or the modified cold bath, is more effective during a fast. (7) Peristalsis favors the absorption of toxins, and cathartics should be used only to remove undigested food. The presence of intestinal ulcers should be assumed to exist in every case, and the proper treatment is rest, which is better attained by fasting and a restricted diet, thus preventing hemorrhage and perforation. (9) The presence of diarrhea and vomiting indicates the adoption of the fasting treatment. (10) Fasting and

a restricted diet shorten the course of the disease, and many cases run an abortive course after the amphibolic period. (11) Many of the vaunted cures from specific drugs are nearly always due to dietetic errors. (13) In the report presented there were forty-eight cases without a death. Of eighty-seven whites two, or 2.2 per cent, died; of the colored two died. The low mortality of 4.4 per cent of all cases he ascribed to the therapeutic fasting.

Is the Consumptive Chest Flat?

W. Hutchinson (*Journal of the American Medical Association,* May 2, 1903) says the typical tuberculosis chest is round instead of flat, and has an average index of about 80, nearly 10 degrees above the normal.

This type of chest precedes the disease.

It is an abnormal persistence of the fetal, infantile, and the child type of chest.

Any chest more than eighteen years of age which shows an index of 80 or higher should be regarded as abnormal, and as rendering its possessor more than usually liable to tuberculosis.

The occurrence of such a chest in any patient over eighteen years of age suspected of tuberculosis raises a strong probability of the disease.

The chests of growing boys and girls should be systematically measured at stated intervals, and wherever the index is found distinctly higher than that normal for their age, active measures should be taken to remedy the defect.

All those sports and exercises which involve wide-swinging use and play of the arm, chest, shoulder group of muscles, such as tree climbing, swinging from ladders, from rings, from bars, ball-throwing, spear-hurling, tennis, swimming, will tend to correct this defect and flatten the chest down to its proper index.

These in fact are the influences which have made the human-chest shape, and all that is needed to perfect it in the individual is a healthy reversion to the arboreal habits of our prehuman and the war sports of our savage ancestors.

Further Investigations Concerning Streptococci.

H. Aronson (*Münch. med. Woch.,* April 7, 1903) says that former experiments have led him to the conclusion that there are no specific differences between the streptococci found in various infections, such as erysipelas, scarlet fever, articular rheu-

matism, and sepsis. All streptococci may cause joint and heart affections in horses. The serum of a horse immunized with a certain variety of streptococci protects against and agglutinates in the same manner all streptococci.

In his more recent experiments Aronson employed twenty different varieties of the streptococci. They were administered to horses without previous animal passages, and their agglutinative powers were tested and compared with the immunizing serum and that obtained from other streptococci. The agglutination must be macroscopically visible to be convincing. The experiments showed that horse serum markedly agglutinates only the material with which it has been treated; it does so only a little or not at all with other streptococci, even when they come from the same human disease. Agglutination is therefore an individual reaction. The specific nature of the scarlatina streptococcus cannot be demonstrated; therefore there cannot be specific scarlatina serum.

A long series of experiments on mice, rabbits, and dogs proved that it is impracticable to prepare a serum from streptococcus cultures directly derived from human beings. He therefore adds to his serum, which is equally directed against all streptococci and is obtained by treating a horse with highly virulent streptococci, a fluid produced by immunization with streptococci taken directly from human subjects. Exact measurement of the latter has not yet been possible. A uniform action can only be secured by mixing the sera of different horses and by the use of numerous races.

The Etiology of Endocarditis in Childhood.

Sanford Blum (*Archives of Pediatrics,* May, 1903) says that in childhood the endocardium, as all of the tissues, has less power of resistance than in adult life, and accordingly succumbs to attack more readily. Again, congenital defects sometimes exist which at once furnish a weak spot vulnerable to intercurrent factors. Children are the chief sufferers from the exanthemata, and endocarditis secondary to this group of diseases is practically exclusively limited in its inception to the epoch of childhood. About puberty great demands are made upon the heart, and here again the endocardium may be affected. There is in infancy a not insignificant number of cases of congenital endocarditis of a severe grade which never attain adult life. In fact, of the severe cases of congenital endocarditis, other than those implicating the

pulmonic orifice rarely exceed the age of twelve. The predisposition to occurrence in certain conditions—for example, with rheumatism—is vastly greater in childhood than in adult life. Malignant endocarditis is exceptional in infancy and rare in later childhood; when it does occur it is most frequently associated with rheumatism. From the atheromatous ravages of advanced age alone the child completely escapes. But the effect which depraved systemic conditions in the mother—alcoholism, metallic poisoning of the blood, etc.—may exert on the endocardial structures of the fetus can at present only be conjectured. That bacterial endocarditis may occur in the embryo the writer sees no reason to deny.

The Effect of Roentgen Rays upon Certain Bacteria.

W. H. Bean (*Journal of Advanced Therapeutics,* June 1, 1903) recently made a series of experiments to determine what effect the Roentgen rays had upon certain bacteria. The culture medium used throughout the series was bouillon, and the basis of each experiment was a twelve-hour culture. Immediately before exposure to the rays a second and third tube were inoculated from this culture, one of which was exposed along with it, the other being kept as a control. After the exposure a fourth tube was inoculated from the culture, and incubated with the second and third tubes at 37° C. for twelve hours.

The writer concludes that the Roentgen ray has no effect whatever upon bacillus coli communis, bacillus typhosus, staphylococcus pyogenes aureus, Klebs-Loeffler bacillus, or streptococcus pyogenes during exposure of one hour or less, no matter what make of tube is used or what the method of excitement is.

Poisoning by Illuminating Gas: Causes and Treatment.

T. M. Pilcher (*Brooklyn Medical Journal,* May 1, 1903) says the toxic effects of inhaling illuminating gas are due primarily to chemical changes produced in the constituent elements of the blood, this being a substitution of carbon monoxide hemoglobin for the oxyhemoglobin, so diminishing the supply of oxygen to the tissues. Further, that the direct cause of most of the symptoms is a diminished percentage of oxygen contained in the arterial blood supplying the central nervous system.

If the above be true it is a condition in which oxygen should be administered pure, in order to force it into simple solution in the blood and so reënforce the remaining oxyhemoglobin.

For the purpose of supporting the circulation, diluting the poison, assisting its elimination, and its possible influence in breaking up the chemical combination of the CO with the hemoglobin, a copious infusion of salt solution should be administered. Such infusion should be reënforced in the more severe cases by a direct blood transfusion, whereby an increased supply of oxygen-carrying hemoglobin is obtained.

To control the tendency to acute dilatation of the heart, a free use of the cardiac stimulants should be early resorted to.

Edema of the lungs is the chief of the secondary sources of danger, and must be constantly watched for and every possible measure taken to guard against it.

Bactericidal Power of Milk.

Klimmer (*Archiv für Kinderheilkunde,* Bd. 36) conducted a series of experiments with samples of fresh milk to ascertain whether they possessed bactericidal properties, as many authors claim. His results show the following: Asses' milk contains less bacteria in comparison with cows' milk, and in the former lactic acid fermentation is slow, though a chemical decomposition occurs with gas formation. The usual saprophytes, milk bacteria, etc., rapidly multiply in both cows' and asses' milk; intestinal bacteria, *i. e.* colon and typhoid bacilli, increase readily in both these media, so that the bactericidal power of milk cannot be considered to be of any value. The same may be said of human milk, in which a slight bacteriolytic reaction is evidenced only for a short time after withdrawal from the gland.

Neurasthenic Pulse Phenomena.

Braun and Fuchs (*Centralblatt für innere Med.,* No. 49) describe in an article the normal and different irregular forms of the heart's action, and later take up neurasthenic arrhythmia. In neurasthenia the influence of breathing on the pulse is plainly evidenced—in fact the respiratory form is the most frequent form of arrhythmia noticed in cardiac neurasthenia; decided fluctuations in the frequency and height of the pulse waves are in evidence. In a quiet recumbent position the pulse becomes regular, although any slight exertion will again produce irregularities. In all probability the sensitive vagus centers are the cause of arrhythmia in the neurasthenic, particularly as this irregularity is corrected by the administration of atropine.

The Serum Diagnosis of Tuberculosis.

L. M. Loeb (*Journal of the American Medical Association*, May 23, 1903) says under various conditions animal sera agglutinate homogeneous cultures of human tubercle bacilli in liquid media. Such sera may be obtained from the human and animal body without the presence in it of the bacillus of tuberculosis. It is doubtful whether the agglutinative powers are ever due to the specific action of the bacillus tuberculosis. The presence or absence in the adult human blood serum of agglutinative properties for tubercle bacilli is no decisive evidence of the presence or absence of tuberculous lesions in the body.

THERAPEUTICS.

Adrenalin.

At a meeting in Bonn, Germany, of the Niederrheinische Gesellschaft für Natur- und Heilkunde, October 27, 1902, Geheimer Sanitatsrat Dr. Nieden spoke on the extract of the suprarenal gland. Of this there are now on the market seven preparations of by no means equal value. Among the seven the atrabilin of the Mohrenapotheke in Breslau, and the adrenalin produced by Parke, Davis & Co., Detroit, Michigan, are the most active and the best suited to ophthalmic practice. The adrenalin is dispensed as solution adrenalin chloride, 1:1000, containing 0.7 per cent sodium chloride and 0.5 per cent chloretone. It is a sterile, non-irritating, permanent liquid, and is active when diluted to the extent of 0.0001 per cent. Atrabilin is non-irritating, but less permanent, and more expensive. The other preparations—suprarenin, epinephrin, extr. de caps. surrenales, extr. suprarenale sólut.—applied to the conjunctiva cause more or less pain for a short time.

One property is common to all these preparations: in one-half to one minute after their instillation into the conjunctival sac they produce a blanching of the conjunctiva which is far greater than that which follows the application of cocaine, and which lasts from one-half to two hours, followed by a reactive hyperemia. First, there is a contraction of the capillaries, which is at once attended by a constriction of the veins, while the larger arterial branchlets are less influenced.

This property is very useful for differential diagnosis, and indicates whether the physician has to deal with a merely superficial irritation and inflammation of the tissue, or with a deeper-

seated inflammatory process. No demonstrable influence over the iris and choroidal vessels could be observed. There does, however, ensue, as could be seen from the fluorescent coloring, a distinctly retarded secretion of the conjunctival mucus and a diminution of the tear secretion. Pupilary movement is not affected. Adrenalin reënforces and intensifies the action of cocaine, atropine, eserine, and pilocarpine.

Internally (5 to 30 drops) adrenalin is said to increase blood-pressure and to retard the pulse-beat after the manner of digitalis, hence it has indications similar to those of the latter drug.

Thus, the external application of adrenalin is indicated in ophthalmology, first as a diagnostic agent, secondly as a therapeutic remedy, and in all conditions of the superficial membranes which are produced by a disturbed congestion of blood, be they chronic blepharitides, conjunctival hyperemias (especially of a functional nature), spring catarrh, granular conjunctivitis, or especially the swelling or engorgement of hay-fever. In corneal inflammations adrenalin is similarly indicated where there is too great a supply of blood, as in keratitis vasculosa, pannus trachoma, and in episcleritis, acute and chronic. Clear and pronounced is also the power of adrenalin to produce pressure in chronic and absolute glaucoma, especially in combination with pilocarpine and eserine. The photophobia attended with distressing lacrimation is favorably influenced by the reduction of tear secretion following the use of the remedy; similarly, the contraction or lessened swelling of the mucous membrane produced by adrenalin in the nasal duct materially facilitates the passage of sounds.

But the greatest praise must be bestowed on the hemostatic power of adrenalin in operations on the connective tissue; this power renders possible (through the simultaneous use of cocaine) the attempt to advance the muscles in an operation for squint, while keeping the field of operation completely and perfectly free from blood, the operator thus being enabled to work with the greatest accuracy, as is necessary in such cases. The same is as true of pterygium operations. Further, a more profuse and subsequent hemorrhage is not to be feared; if it actually occurs, it can be very easily checked. The direct introduction of adrenalin into the veins is to be avoided, for when attempted it gave rise, in my observations, to symptoms of collapse and disturbances of the circulation and respiration.

There can be no doubt that the extract of the suprarenal gland has gained its naturalization right to a place on the office table of the ophthalmologist, and that its action prompts us to test it further when internally administered.

Prophylaxis of Plague.

At the recent meeting of the American Medical Association, J. J. Kinyoun (*Medical Record,* May 16, 1903) said that the *sine qua non* is the accurate diagnosis of the first case, and that the clinical forms are so varied that error in diagnosis of first cases is the rule. Plague might resemble anthrax, tonsillitis, mumps, diphtheria, erysipelas, pneumonia, acute pleurisy, malignant pericarditis, endocarditis, typhoid, typhus, relapsing and malarial fevers, acute dysentery, miliary tubercle, septicemia, pyemia, and syphilis. These forms of plague and its insidiousness, and the inexperience of the profession, render plague one of the most difficult to recognize. For diagnosis a bacteriological examination is essential. He then considered measures to be adopted in caring for such patients, dividing up the treatment into the following different heads: (1) Isolation pending a diagnosis; (2) segregation under medical supervision of contacts and suspects; (3) disinfection of premises; (4) sanitary measures in immediate vicinity; (5) destruction of vermin and their examination; (6) general measures against the dissemination of the disease. He then referred briefly to the consideration of maritime commerce, the personnel of vessels, the cargo, the vessel itself. Under the heading of maritime quarantine he considered the measures to be taken in a port where plague exists, both in its detection and eradication, and the measures to be taken to prevent its spread.

Suggestions on Seasickness.

Otto Dornbluth (*Münchener med. Wochenschrift,* No. 14) finds that at the onset of seasickness the feeling of discomfort begins with the downward motion of the ship. During this sinking motion one should take a deep inspiration so that the abdomen is thrown forward and through the contraction of the diaphragm rendered tense. If this simple procedure is carried out the disagreeable sensation is not experienced. This method and that of applying a tight abdominal bandage seem to have the same beneficial result. Individuals who are particularly susceptible to this malady the author recommends to take as a prophylactic 2 to 3 grammes of sodium bromide in a glass of water daily for one week previous to the journey; for a short journey three evening doses will suffice. Meals should be regular, and as much as possible like that to which the patient is accustomed.

Treatment of Chronic Colitis With High Ememas.

Aldor (*Berliner klin. Wochenschrift,* No. 19) has for years used with good results in all cases of primary colitis enemas warmed to 45° or 50° C., and with a tube 85 centimeters long large injections of Carlsbad sprudel water are injected high in the colon, a cleansing injection being previously employed, after which two or three liters of the aforementioned water is injected without discomfort if a hot-water bag is placed on the abdomen for two or three hours. The enema should be used daily, and be repeated from twenty to twenty-five times. The author believes this method to be the most efficacious, as he demonstrates by a number of clinical histories. Children also bear large injections, up to two liters, without inconvenience. The author likens this treatment to gastric lavage.

The Treatment of Carcinoma of the Rectum by Mercuric Cataphoresis.

G. Betton Massey (*Journal of Advanced Therapeutics,* May 1, 1903) says that in the cataphoric operation we have a means for the immediate destruction of malignant growths in the middle and possibly the upper rectum, without damage to or dilatation of unaffected portions of the canal below the disease; that the cataphoric operation possesses the advantages of bloodlessness, ease of control and direction, and freedom from the possibilities of operative infection, and that the simplicity and directness of the method are a further advantage in gaining the patient's consent to subsequent surveillance and a reapplication at the earliest moment should some of the malignant cells have escaped destruction at the initial application.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Retinal Detachment and Treatment.

At a recent meeting of the Vienna Gesellschaft für Aerzte, Muller (*Medical Press,* May 20, 1903) exhibited a patient whom he had treated very successfully by an ingenious operation for

detachment of the retina. According to the patient's history he was highly myopic till 1891, when he suddenly lost his sight.

The myopia before this sudden blindness was estimated at 9 diopters. The accident was diagnosed as detachment of the retina, which was treated in the orthodox way, viz., diaphoretics, rest, and occlusion bandages, but without any success.

Total destruction of vision appearing inevitable, he opened up the external coverings of the eye after Kronlein's operation for resection, and then made an opening in front of the sclera ten millimeters long without injuring the chorion.

After thus clearing by resection a large opening through the tough walls of the eye, he took a fine knife and ran it quickly through the choroid into the detached space, from which exuded a quantity of subretinal fluid. All bleeding vessels in the choroid were tied with very fine silk thread.

The patient before the operation could not discern the fingers, but after the fluid was withdrawn he was able to count them at three meters distance.

The wound was now healed, leaving a central scotoma.

Muller has performed the same operation in two other cases with an equally satisfactory result—one of them eleven months and the other fifteen months ago. He is inclined to infer from these results that the operation is a practicable one, and should be resorted to in cases of a high degree of myopia where the macula is in danger and blindness likely to ensue.

Klein asked what effect the operation had on the refraction of the organ, and whether the present index in the myopia had been taken. Muller replied that the refraction in this case was an alteration of 12 to 13 diopters. The previous patient operated on was a myopic of 9 diopters, which has since the operation been converted into a hypermetropia of 4 diopters.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M. D.,
Lecturer on Dermatology, Detroit College of Medicine.

Some Therapeutic Properties of Bone-marrow.

In the *Journal of Cutaneous Diseases* for May, 1903, Chalmers Watson, F.R.C.P.E., writes in part:

In broad outline this theory is, that the bone-marrow produces an internal secretion of vital importance in the economy;

that this substance is prophylactic against the injurious action of various bacteria which in health exist as saprophytes in different tissues; and that its defective production is liable to be followed by pathogenic action of these microörganisms. The results of this pathogenic activity vary much in different subjects, in accordance with the all-important factor of individual reaction. As the main sites of these bacteria are the respiratory tract, skin, alimentary canal, and vagina, it follows that disease will be more or less directly associated with one or the other of these surfaces as the main source of infection.

The bone-marrow contains a substance or substances of distinct therapeutic value in the treatment of some skin affections.

The bone-marrow employed is not "red marrow," so-called, but the general marrow from the shaft of the long bones. The preparation employed is an ethereal extract termed "myelocene."

The utmost care is necessary in the selection and preparation of this substance, and much investigation is yet required before a fully reliable standard preparation is permanently available. Equal care and attention is called for in the local application of myelocene to abraded surfaces.

Myelocene is not antiseptic in the ordinary sense of that term; it cannot be applied to an abraded surface in the manner of an ordinary ointment. This difficulty may be overcome by the addition of other substances with known antiseptic properties—*e.g.*, boric acid.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Pregnancy in a Woman Aged Fifty-one.

M. Scharlieb (*Journal of Obstetrics and Gynecology,* April, 1903) reports a case diagnosed as a degenerating fibroid of the uterus, but proving to be one of pregnancy. The patient, aged fifty-one, had previously borne nine children, the youngest being 4½ years old. Shortly after her last confinement she noticed a swelling the size of an egg on the left side of the abdomen. This grew steadily larger, and after two years she went to the Great Northern Hospital and was told that she had a "bleeding tumor." The tumor continued to grow and was somewhat painful, the

menstrual periods were too frequent, and the discharge was at the same time offensive. The periods stopped three and a half months before admission, being replaced by an offensive discharge. This was accompanied by an increased pain, which was always present, and the patient grew thinner. On admission the abdomen was prominent chiefly below and to the right side of the umbilicus, and a rounded hard tumor, freely movable from side to side, was found reaching to the level of the umbilicus. No certain signs of pregnancy were present, and there was no mammary development. On opening the abdomen the uterus was found enlarged to the umbilicus, smooth and somewhat globular, and containing a fetus of about three months' growth. There was discoloration of the tissues on the dorsal surface, showing that the fetus had been dead for some time.

Hysterectomy in the Treatment of Puerperal Infection.

Professor Leopold, of Dresden (*Annals of Gynecology and Pediatry,* May, 1903), says:

"In case of puerperal infection, hysterectomy will be indicated when it shall have been proved by all symptoms that the uterus is the sole point of continued departure of the infection, and that all other means employed against the malady are in vain.

"This indication applies especially to those cases of retention of the placenta, which is undergoing decomposition and cannot be removed.

"If the infection has extended beyond the uterus and if it has produced a severe peritonitis, or a septic thrombosis, or a unilateral or bilateral affection of the appendages, or an abscess of the uterus, hysterectomy alone will not suffice to cure the patient, because this operation does not take into consideration the anatomical alterations which are added.

"If the disease is pursuing its course toward a fatal termination one should, according to the circumstances, have recourse primarily to surgery with the intention of searching out and evacuating the focus of suppuration. Up to this point, from our searches, we should say that injections of antistreptococcic or similar serum could contribute directly or indirectly to recovery.

"In all cases early and minute search for foci of suppuration must be insisted upon. The searching for and extirpation of veins involved in suppuration will, in the future, contribute brilliant success in the treatment of the more serious types of puerperal septicemia."

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D.,
Attending Neurologist to Harper Hospital.

Use of Ergot.

The experiences of Dr. A. T. Livingston with ergot as detailed in the *Journal of the American Medical Association* of March 21, 1903, are very interesting. He is an enthusiastic believer in the great possibilities of ergot, and cites remarkable cases in confirmation of his claims. He cites an emergency case to which he was suddenly called, in which there was most violent and uncontrollable vomiting, that had continued for some hours. Under the influence of a hypodermic injection of ergot the retching lessened, even before the syringe was emptied, and in a short time the patient was calm and quiet, and recovery was rapid from that time.

A short time later he was called to this same patient, laboring under great mental excitement because he had discovered the loss of a wallet containing a thousand dollars. Here again the ergot proved its efficiency in restoring the equilibrium of circulation, and the patient's excitement was promptly quieted by an injection of ergot judiciously administered.

Dr. Livingston believes that ergot not only has a tendency to contract the peripheral arterioles, but that it has a selective action on vessels which are from any cause at the time of this administration abnormally dilated: the remedy thus tending to restore a normal tone to the general circulation. He has many times relieved headache by its use, believing that the ergot relieves congestion of cerebral vessels, thus producing its happy effect. In insomnia, too, he has found it a most efficient remedy.

These are some of the more pronounced neurological conditions in which the writer has found it remarkably effective, but he has also used it with helpful results for relieving pain in general. He believes that frequently pain is, as he says, "the cry of a nerve because big-bellied blood-vessels are squeezing it too harshly." And in morphine poisoning, in opium poisoning, in appendicitis, and in cases of the drink habit, he has found it an efficient remedy.

Dr. Livingston is, no doubt, an enthusiast as to the use of ergot. His claims, however, it will be well to thoroughly test in practice. Ergotism he does not fear at all, regarding it as of equal seriousness with "snakes in Ireland."

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Box 484, Detroit, Michigan.

THE RATIONAL TREATMENT OF DROPSICAL CONDITIONS.—In order to elucidate the principles and details of treatment in the above disease, it would be better first to mention some of its peculiar etiological and pathological characteristics. Dropsy signifies the presence of a serous fluid (which has escaped from the blood-vessels) in the subcutaneous or submucous cellular tissue, in serous cavities, or in the cellular tissue of certain organs. When the subcutaneous cellular tissue is extensively involved it is called anasarca; when restricted to a limited area it is called edema. When this serous fluid accumulates in the peritoneum it is ascites. If we have both the subcutaneous cellular tissue and serous cavities implicated, we have what is called general dropsy. Dropsy results from a loss of balance between exhalation and absorption. It may be due to an obstruction in the circulation, to a debilitated state of the vessels and tissues, or to an abnormal condition of the blood. A variety of organic and functional disturbances will create all of these conditions.

Success in treatment will be measured by the ability of the physician to locate and remove the predisposing and existing causes. The starting-point of this disease, in the great majority of cases, is in the heart, liver or kidneys. Heart dropsy begins in the feet and ankles, and extends upward; ascites in the peritoneum, from obstruction in the portal circulation. Renal dropsy starts with a puffiness in the eyelids, face, and hands; it may finally involve the whole body as well as serous cavities. By bearing the above facts in mind, search for the cause of the disease is facilitated. After ascertaining the source of this trouble and addressing attention to its removal, the next step is to promote absorption of the fluid. This is done by the use of diaphoretics, diuretics, purgatives, and general restoratives. Our aim should be to deplete over-filled vessels, relieve local stasis, and promote an uninterrupted blood current through all the organs and tissues of the body. How can we best accomplish this object? Shall we ply our patient with innumerable drugs to meet the different indications, or shall we endeavor to find some agreeable medicinal combination possessing the specific therapeutic properties to fulfil these indications, without discomfort or detriment to the patient?

If successful results from the use of a remedy in disease furnish a guide to practice, the writer has the strongest grounds for recommending Anasarcin to the profession as a most valuable and reliable remedial agent in dropsy. The ingredients, as published by the manufacturer, indicate that it stimulates the heart, equalizes the circulation, is a safe diuretic, efficient diaphoretic, and promotes the absorption of accumulated serous fluids. The writer has carefully tested Anasarcin in a large number of dropsical patients with the most complete confirmation of the above claims. A few of the clinical cases in which Anasarcin was chiefly employed are herewith reported:

CASE I.—Anna M., aged forty-two. Symptoms as follows: A weak and intermittent pulse, palpitations, face bloated and purple, anxious countenance, dyspnea, legs edematous and painful, urine scanty, foul, and charged with lateritious

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sediment, serous accumulations in thorax and peritoneum, bowels constipated, with some distention and flatulency. Diagnosis: Dropsy, from valvular incompetency and portal obstruction. Treatment: Mercurial purgation, followed with two small doses of Epsom salts and cream of tartar. The patient was then given Anasarcin Tablets, one three times a day, with a small dose of Epsom salts every second or third day. This treatment was continued three weeks, in connection with an upbuilding diet, when the patient, being entirely relieved, was discharged.

CASE II.—Mary R., aged sixteen. Symptoms: Pain in right side, feces clay-colored, urine high-colored, scanty, depositing lateritious sediment, not coagulable, tongue coated, bowels constipated, abdomen distended by serous accumulations, legs edematous. Diagnosis: Ascites and anasarca, from obstruction of liver and portal system. Treatment: Small dose of calomel, followed by saline purgation, and then Anasarcin Tablets, one three times a day; small doses of Epsom salts and cream of tartar were given on alternate days. Under this treatment patient was relieved and discharged at the end of eighteen days.

CASE III.—Female, aged thirty-five, of intemperate habits. Symptoms: Was confined to her bed with a tense, swollen, and enlarged abdomen, legs edematous, pitting on pressure; oppressed with suffocation, the urine scanty, dark-colored, and lateritious, not coagulable by heat; violent bilious vomiting; bowels constipated. Diagnosis: Anasarca and ascites, caused by liver and portal obstruction from intemperance and exposure. Prescribed five grains each of calomel and bicarb. soda, followed by Epsom salts and cream of tartar; then gave Anasarcin Tablets, one three times a day; a saline aperient on alternate days; diet nutritious. Treatment continued sixteen days, with recovery and discharge of patient.

CASE IV.—John W., aged thirty. Symptoms: Pale and anemic, spleen en-

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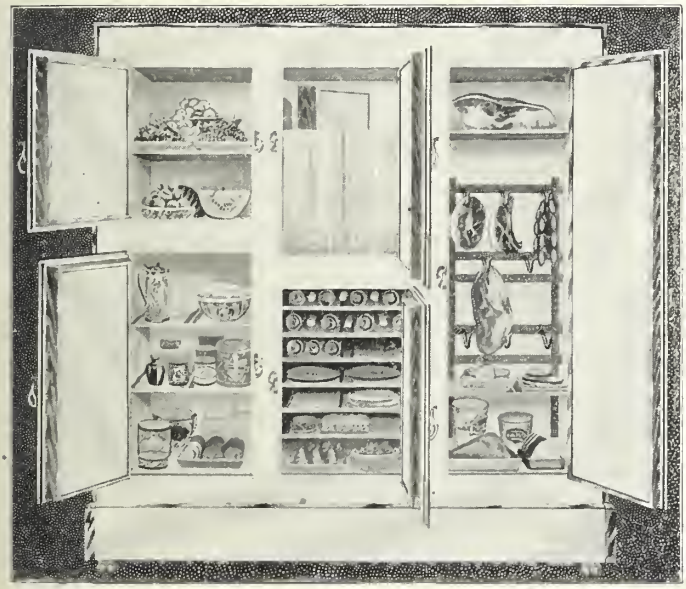

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larged, abdomen tense and hard, with evidence of serous accumulations, extremities edematous, urine scanty, high-colored, and containing lateritious sediment, no coagulation on application of heat. Diagnosis: Ascites and anasarca, from prolonged attack of malarial fever. Treatment: Small dose of calomel, followed by Epsom salts and cream of tartar; Anasarcin Tablets, one three times a day; tinct. of iron, ten drops three times a day; Epsom salts and cream of tartar, small dose every other day; nutritious diet. Treatment continued thirty days; recovery and discharge.

CASE V.—James M., aged sixteen. Symptoms: Slightly anasarcous in the extremities, urine scanty and pale, slight coagulum by testing with nitrous acid, shortness of breathing. Diagnosis: Anasarca, from mild attack of scarlatina. Treatment: Hot sponge bath daily, fifteen drops spirits of nitre three times a day, small dose of Rochelle salts every second day, Anasarcin Tablets, one three times daily, nutritious diet. Treatment continued twenty-one days, with complete recovery and discharge of patient.—A. B. WILBURN, M.D., in the *St. Louis Medical Era.*

THE Park View Sanatorium, Columbus, Ohio, is one of the high-class institutions for the care of nervous invalids. The Annual Report, just published, makes a very creditable showing. This report will be mailed to any physician, upon request.

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strict reference to the personal equation. The history of the institution shows that these intelligent methods have been markedly fortunate in their results, and the percentage of permanent cures has been highly gratifying. The institution is conducted along strictly ethical lines, the superintendent and resident physicians have had extended experience and special training, and the advisory board is composed of eminent members of the medical profession.

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SUMMER MORTALITY OF CHILDREN.—In most of the cities of this country the mortality among children from summer diarrhea is three-fold greater during the hot months than that from tuberculosis. Out of a total of nearly 2000 cases reported by Holt, only three per cent were exclusively breast-fed. The contention, therefore, that cholera infantum and allied conditions are the result principally of impure milk supply and careless feeding is well sustained.

For obvious reasons cow's milk must be the principal substitute for mother's milk when from any cause the child

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cannot be fed at the breast. It must also constitute an important part of the dietary of breast-fed children after they are weaned. The milk supply of most cities is absolutely unsafe during the summer months even for adults, and for infants and children it presents grave dangers. The problem is to secure a pure milk for infant feeding. With the solution of this problem will come a material decrease in the mortality as well as the morbidity of children. In the Highland Brand Evaporated Cream the physician will find an absolutely pure milk which can be altered to meet every indication. It is manufactured under the strictest supervision and is absolutely pure. It is made by the Helvetia Milk Condensing Co., Highland, Illinois.

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URIFORM.—The modern treatment of diseases of the urinary tract is based essentially upon the fact, established by bacteriology, that the majority of these conditions are of infectious origin. Since Neisser's discovery of the gonococcus, it has been shown that this organism is the etiological factor in many urinary affections which were formerly considered of a simple catarrhal nature. Other forms

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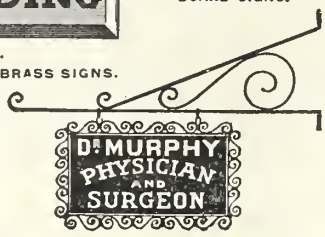

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of microörganisms, especially the pyogenic group, may also be concerned in their causation. In accordance with these newer views in the pathology, the treatment has undergone corresponding changes. It has now become the aim to effect the destruction of the infective agent by antiseptic remedies, of which a large number intended for local use has been introduced in recent years. While, however, the systematic employment of local antiseptics is often sufficient in itself to produce a cure in acute cases, it is less successful in the subacute and chronic forms of diseases of the urinary tract, in which the bacteria have penetrated into the deeper parts and have given rise to more marked changes in the mucous membrane. It is here that much benefit can de derived from the internal administration of antiseptics and urino-genital remedies.

Uriform is a carefully selected combination of a number of remedies of this kind. Its antiseptic properties are dependent upon ammonium formaldehyde. This drug sets free formaldehyde during its elimination by way of the kidneys, not only preventing decomposition of the urine, but also exerting an antiseptic influence upon the mucous membranes with which it comes in contact, by destroying germs in the secretions and on the surface. The anticatarrhal and alterative properties of Uriform are supplied by saw palmetto and santalum, both of which are recognized as among the most valuable remedies in the treatment of diseases of the urinary organs. These comprise the chief ingredients of this preparation, the others (damiana and coca) having been added for their tonic action upon the nervous apparatus of the genito-urinary tract.

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rectly upon the affected mucous membrane. In subacute and chronic urethritis it destroys the gonococci in the deeper portion of the canal which cannot be easily reached by anterior injections or irrigation, or are even inaccessible to them. It also exerts a curative effect upon the catarrhal processes in the mucous membrane and relieves the irritation. In cystitis, Uriform prevents the decomposition of the urine in the bladder, which is one of the main objects of treatment, arrests the formation of pus and mucus, allays the tenesmus, and thus contributes materially to the return of the mucous membrane to a healthy state. Cases of chronic catarrh of the bladder associated with hypertrophy of the prostate or urethral stricture are also much benefited by this preparation, the urine being rendered unirritating, and micturition becoming less frequent and painful. As is well known, disease of the prostate gland and seminal vesicles is frequently due to infection by gonococci, and in these conditions, which are so often a source of sexual disorders, Uriform is an important auxiliary in the treatment by reason of its antiseptic, alterative, and tonic properties. Furthermore, in cases in which neurasthenia is of sexual origin, and is connected with pathological processes in the posterior urethra (urethritis, prostatorrhea, seminal vesiculitis, etc.) much benefit will be derived from the administration of Uriform, since besides its local alterative action it gives tone to the relaxed mucous membranes.

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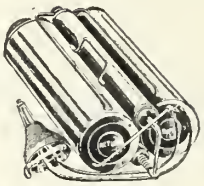

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THE MEDICAL AGE

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ORIGINAL CONTRIBUTIONS.

A PLEA FOR A BROADER INTERPRETATION OF SPECIALISM.*

BY A. THUNER, M.D., DETROIT, MICH.

In this era of abounding specialisms, of which our own may be taken as a type *par excellence,* is it not a fact that a process of segregation has almost cut us off from the broad highway of general medicine?

The special by-paths by which the founders of our specialty made their way seem now almost lost to our view, and we find ourselves standing upon a field where may be seen an army of men specially trained in the care of the organs of vision and of hearing.

That there is tangible proof of the value of purely topical treatment of disease of these organs none will deny, for they furnish many of the most striking examples of the value of therapeutic procedure, but, on the other hand, there are numerous conditions for which no efficient local treatment has been formulated.

There is, therefore, one question that addresses itself to each of us, and which has assuredly addressed itself to me, namely: Shall we look upon morbid processes occurring in the tissues of the eye or ear as wholly independent of the vital organism of which these organs are a part? Or shall we regard these as purely local manifestations of causes operating throughout the body, and therefore to be considered as mere symptoms of the general condition?

It will be admitted that the general trend of special thought has been and is toward the adoption of the view that what we have to deal with is simply the diseases of these organs—that is to

*Read before the Detroit Ophthalmological and Otological Club, April 10, 1903.

say, of the mechanism, structures, and tissues of which they are composed. And while this fact may not be denied, a little reflection will convince us that there is a substantial relationship between the disease phenomena manifested in these tissues and that of the general organism.

The clinical evidences of the truth of this proposition are powerfully reënforced by the action of poisons and drugs in toxic doses. There seem to be as many drugs that act directly or indirectly on these organs, producing signs of altered function or positive organic changes, as are known to produce similar effects upon the other organs of the body.

And when we come to consider toxemia and the specific forms of disease the conclusion is irresistible that in these instances at least the local conditions are due to the general. If we exclude the purely local infections, and morbid processes arising from injuries, in which infection is a factor, there seems to be no good ground for regarding the morbid processes observed in these organs as due to purely local causes.

It is quite true that in many diseases of these organs local treatment is the *sine qua non* of success, but in each instance the explanation of the value of this special treatment may be sought for in the mechanism of construction of these organs, or in their special functions. The great diathetic and constitutional causes of ophthalmic and aural diseases, the host of poisons capable of modifying the functions and inducing structural changes in these organs, and even the reflex or purely symptomatic manifestations of affections of distant organs, although highly specialized in function, are as intimately concerned in the general processes of life, healthy or unhealthy, as any of the other organs of the body may be.

From the view-point of the clinician it may be pointed out that rheumatism, gout, syphilis, alcoholism, tobacco, etc.—all well recognized factors in the production of ophthalmic diseases—certainly produce these changes, by virtue of their wide-spread influence throughout the organism; and therefore the morbid phenomena of the eye, in these instances, must be recognized as mere symptoms due to the more general causes operating throughout the economy.

We often hear that cold is the cause of this or that affection, including many of the most common ills which flesh is heir to. It is, however, not a true cause of any specific form of trouble. It is the exciting cause that tends to develop this or that tendency in the body—a pleurisy in one, pneumonia in a second, cystitis in a third, quinsy in a fourth; or it may be an aural catarrh or a

conjunctivitis. It is, therefore, inconceivable that cold is the true cause of all of these conditions.

What is the true cause? The true cause is an internal cause, and it has been truthfully said that "an internal cause and an unknown cause are synonymous."

The processes set at work by the disturbing accident of a cold change the phenomena of healthy life, and the organism with all its tendencies undergoes changes of great complexity—changes of blood-pressure, changes of nutrition, physiologico-chemical changes, etc.

There are a host of conditions to which a nosologist's label does not correspond which we see daily in the consulting-room, and for which we cannot give a name, but which nevertheless are common enough and definite enough for the purposes of clinical treatment. But who amongst us is able to predict the true outcome of initial changes that may insidiously invade the organism? In one word, we are dealing with the same factors and the same potentialities in the diseases of the eye as we have to deal with in the several organs and tissues elsewhere in the body.

Is it not therefore clear that general conditions, such as anemia for instance, may be the very factors on which the successful treatment of the special organ depends? And what is here said of anemia is likewise true of all the other alterations in the circulating medium which are known to science.

Without trespassing upon your time further let us turn to the practical and logical inferences suggested by these hastily stated considerations. What are they?

1. That ophthalmic and aural therapeutics should not be divorced from general therapeutics.

2. That by limiting our point of view to the organ and structures of the orbit, and that of the petrous portion of the temporal bone, we cannot meet the demands of science in practical therapeutics.

3. That having to do with the care of highly specialized organs requires us to practice a special art, but at the same time it entails upon us the duty of mastering the principles of general pathology and therapeutics, and especially to become familiar with clinical history and the etiological factors of disease processes.

4. That pathological interpretation, which is one of the highest prerogatives of science, cannot attain the best results from too narrow a view of specialism.

In stating the issue thus frankly, and I trust clearly, it may be superfluous to point out that what is here said is not new, and

is not intended to do more than suggest a line of thought, which may yield fruit through reflection and discussion. It may be added that the necessities of science and the highest good of our patrons would seem to justify any change in practical methods that may be found essential to this plan of study and practice.

NEUROPARALYTIC KERATITIS.

BY THOMAS F. KELLER, M.S., M.D., TOLEDO, OHIO.

The gravity of neuroparalytic keratitis is apparent to all experienced ophthalmic surgeons, and in passing I wish to preclude any apprehension that something new is being photographed upon the canvas of histologic research which is not known to the liturgy of the profession.

While the management was somewhat unique when compared with the teachings of some of our ablest ophthalmologists, like Graefe, Hutchinson, Gudden, Magendie, Fuchs, Leber, Hippel, Ebert, Böckman, and others, no preëminence is claimed in accomplishing the desired result, as the same etiologic conditions would have appealed to any student of pathology.

If giving a brief synopsis of this one particular case, which came under my observation within the last year, should interest any one engaged in the healing art, then the object of this paper will have been accomplished.

Charles R——, American, aged twenty-six years, a farmer by occupation, applied for relief August 10, 1901. Macroscopic examination revealed a cloudiness in the center of the cornea of the left eye, and the absence of sensibility and lacrimal secretion led me to suspect trophic and latent physiologic disturbances. The patient admitted having contracted syphilis in January of the same year, with the accompanying initial sclerosis in the months of March and April.

Nothing unusual occurred (save an occasional attack of diplopia and vertigo) from this time until August 7, when he was kicked by a colt on the left temple, rendering him unconscious for several minutes, resulting in an ecchymosed condition of the eye and seat of injury. Having a specific and traumatic history of his maladies, as well as a dull surface of the cornea, which indicated a recent affection, I concluded to resort to heroic prophylactic treatment, with a hope of arresting any further destruction of the epithelium of the cornea, especially if the paralysis of the trigeminus was secondary to a lesion at the nucleus or origin in the brain, hastened possibly by the trauma inflicted.

Having good digestion, and never addicted to the use or abuse

of liquors, he began taking fifteen drops of saturated solution of iodide of kalium, in compound syrup of cinchona and milk, immediately after eating, increasing the amount six drops daily, until he was taking 120 grains a day. This maximum amount was decreased in the same relative proportion as it was increased, and continued in this way for a period of three months.

I also gave him daily hypodermic injections of bichloride solution into the gluteal muscles for ninety days, at which time lacrimation and sensibility of the eye fully reëstablished themselves. Subconjunctival injections of corrosive sublimate, 1:5000, were resorted to every second or third day, until the blood-vessels began forming around the limbus nearest the ulcer.

The eye was constantly protected from the elements with a perforated shield, and the ball was kept moist and as aseptic as possible with a mild solution of boracic acid. Hot compresses and a solution of atropine completed the therapeutic measures.

The result from this form of treatment was a retention of the contour of the cornea, a translucid opacity in the center of the eye of two and one-half millimeters in diameter, and a complete restoration of all the physiologic and anatomic functions of the eye, save the one specified exception.

Neuroparalytic keratitis is sometimes confounded with two other forms of keratitis, namely, lagophthalmia and keratomalacia.

If you will permit me to digress for a moment, I will try to point out the principal diagnostic symptoms, differentiating one from the other.

In lagophthalmic keratitis the cornea becomes desiccated, owing to an inability to close the lids, due to protrusion of the ball, contraction of the lids, or paralysis of the orbicularis palpebrarum muscle, and the ulcers are usually on the lower quadrant or limbus of the cornea, as this part is exposed most of the time during the day, as well as at night, for the eye is always turned upward during sleep.

In keratomalacia our attention is directed to a whitish-substance-like deposit on the conjunctiva on each side of the cornea, which cannot be moistened with lacrimal fluid, and has the appearance of being touched with some unctuous preparation.

Again, this form of keratitis exists only in impoverished and illy nourished children, and never was known to occur in adults. Many other symptoms might be given in describing the various features which are not common one with the other, but I hope sufficient stress has been given on the essential points to aid one and all in making a diagnosis of this, one of the gravest forms of keratitis.

A CASE OF MENTAL DISEASE DUE TO FRACTURE OF THE SKULL WITH PARALYSIS OF THE RIGHT FACIAL NERVE, OR TO SYPHILIS, OR TO BOTH.

BY M. L. GRAVES, M.D., SAN ANTONIO, TEXAS.

Mr. J. S. G——, a dairyman of Hot Springs, Ark., a man of considerable intelligence, but limited education, received a severe injury about the 21st of December, 1901. At this time and prior to the injury his health had been excellent, and he was a very energetic and successful tradesman.

While driving along on a paved street of Hot Springs, his horse, attached to an express wagon in which he was seated, became frightened and ran away. His wagon collided with another with considerable force, projecting him almost perpendicularly in the air, and he fell, striking the right side of his skull upon the macadamized street. The fall was said to be about twenty feet. He was picked up unconscious, and so remained for eight hours. He bled at the nose slightly, but a large quantity of blood came from his right ear, and for about six days after the accident, once or twice daily he would spit up bloody matter, after hard coughing spells. There was also said to be a black coagulum of blood in the corner of his right eye, next to the nose.

During the first night after the accident, while in a stuporous condition, both eyes remained closed, but very soon his right eye was noticed to remain open, while the other one was closed. It was thought that paralysis of the right side of the face was present from the very first. He is said to have had some light attacks of jerking in the muscles of the arms a short time following the injury. Both ears were badly discolored, and around the back of his head from behind the right ear his head was badly discolored and bruised. During the first night after he was injured his teeth were tightly clinched, and for three days thereafter his eyes were said to be crossed in an extraordinary way. After three days this symptom disappeared. His first return to consciousness occurred eight hours after the injury, when he replied to questions with partial intelligence, but soon lapsed into his former condition, and especially after the fourth day, when put under the influence of chloral to keep him quiet, he remained irrational, incoherent, and much disturbed mentally.

From the best information obtainable he has never been quite himself since the injury. No fever was known to have been present after the injury. On the fourth day after the accident he was quite sick at his stomach, but did not vomit. In reply to

inquiries regarding stiffness or retraction of the back of his head or neck, I learn that he tried to stand on his head and heels like a man troubled with meningitis about the fifth day, and it lasted about three weeks, but these manifestations were paroxysmal. He manifested no particular sensitiveness since the injury to auditory, visual, or tactile sensation. From the second day of the injury, for about three weeks, he manifested much distress in his head, which was evidenced by clasping his hands across his forehead and complaining of his head hurting him. His mental disturbance continued to grow worse. He was restless, sleepless, greatly agitated, and markedly depressed. Hallucinations of sight and hearing were unquestionably present, and delusions of persecution as well. Upon the slightest noise, and frequently without hearing any noise, he would become greatly excited, call for a gun to defend himself, and assert that injury or assassination threatened him. These symptoms continued with persistence, but with more or less variation in severity, until February 15, when he was admitted into the institution.

Upon rigid inquiry as to his family history, I learn that his wife and friends know absolutely nothing of any mental or nervous disease anywhere in his family, that he had never had any serious injury or illness prior to this attack, and that his health had been exceptionally good. Especially had he given no history whatever of any injury to his head, and at the time of this occurrence was perfectly well, except for a cold. Upon examination, however, I find enlarged lymphatics in the groins, axilla, postcervical and epitrochlear regions; a spot of alopecia on left side of scalp, and a brown spot on the glands, strongly suspicious of constitutional infection. I should perhaps also mention that he has a right inguinal rupture, and the right testicle is small and only partially descended—congenital.

The patient is a small man, 5 feet 7 inches high, and weighs about 123 pounds. There seems to be very little change in his bodily weight and appearance, although he claims to have once weighed 165. Upon examination his pulse was found to be good in rhythm, volume, and rate—a trifle exaggerated in the latter, being 84, probably owing to the nervous and muscular agitation. His respirations were about normal (20). Neither heart nor lungs have any evidence of disease. The kidneys are healthy. For the first few days he suffered with looseness of the bowels, but this was probably due to our therapeutics.

The most striking evidence of disorder was his mental disturbance. He was confused, depressed, emotional, restless, and had evidently been bellicose. He was admitted to the institution

strongly handcuffed, and his attendants told me that he fought viciously at times, although his character has been that of a mild, peaceable man. He was especially prone to strike with his arms and kick viciously, when his purposes were interfered with. He feels some impending calamity, as death, or destruction, or bodily injury, and seeks to avert it by restless muscular movement and efforts at defense. These, however, have been greatly dissipated since his residence in the institution.

He does not recognize clearly and certainly the names and characteristics of persons whom he meets, but memory seems rather clear for those he has known before the injury. His tendency is to talk incessantly, and to accuse himself of all sorts of crimes and unworthiness, in spite of the fact that he bore an excellent reputation, and himself asserts that he was formerly a good man, though he is now a thief, a robber, and a liar, and wants to reform and preach, but God will not hear his cry. The underlying tone of his mental disorder is melancholia, but it is not the typical form of mental depression, with inhibition of the reflexes, the organic nerve impulses, the emotions, the judgment, and the will.

Marked melancholiacs present evidences of mental pain, together with physical depression in every lineament of face and form and attitude. The pulse is slowed, the respiration diminished, the skin flabby and cold, the bowels costive, the tongue coated, the breath foul, the appetite gone, the reflexes diminished or well-nigh abolished, the face expressionless, and general apathy manifested in sensation, motion, intelligence, judgment, and will —except, of course, in agitated cases, where the mental distress is markedly increased and accompanied by great muscular agitation.

This case, however, presents the striking features of considerable, though inaccurate, perception; of rational, though not always coherent, conversation; of frequent changes of ideas, of vacillating will, of emotional variations, of incessant talking, and rather quick response to all impulses of an organic nature, of a good appetite, and of sound sleep. His tongue is not coated. His skin is not torpid, flabby, or cold; his breath is not offensive; and his secretions not inactive. His physical condition is decidedly better than a corresponding case of acute melancholia, and in some respects its rapid changes resemble mania more than melancholia.

Upon examination of his head, we find strong evidences of traumatism behind the right ear. The right parietal bone shows a slight projection over the squamous portion of the temporal bone, and a corresponding depression not far from the squamous

suture, which looks very much like a slight overlapping of the parietal bone at this suture. The depression extends horizontally back, and turns around a slight projection of the parietal bone, and turns upward toward the sagittal suture a short distance. It is barely possible that the lambdoid suture or junction between the parietal and occipital bones is also affected.

The most marked physical symptom presenting is the paralysis, perhaps complete, of the right seventh or facial nerve. The right side of the face in all its musculature, animated by the seventh nerve, is immovable except by mechanical means. The right eye remains permanently open, but all its movements seem to be perfectly preserved. Electric excitability of the seventh nerve at all its focal points is abolished. I have especially tested the fifth nerve, which supplies sensation to the face and motion to some of the buccal muscles, and I can make out no certain disorder of its functions. If there be anything at all, it is simply slightly reduced sensibility.

The other cerebral nerve, the motor oculi, which supplies innervation to most of the eye muscles, is unaffected. The trochlear, which animates the superior oblique, is unhurt. The olfactory is not affected, as I have made application of such odors as iodoform, asafetida, and ammonia to the nostrils, and he distinguishes about as well with one side as the other. The sixth pair, which animate the external oblique, show no deviation from normal. The glossopharyngeal, supplying taste to the posterior third of the tongue and animating some of the pharyngeal muscles, is normal. The pneumogastric, which supplies all vital organs, shows no deviation from health. The spinal accessory, innervating the sternomastoid and trapezius muscles, readily responds to the electric current; and finally the hypoglossal, supplying the intrinsic muscles of the tongue, is in prime working order. His taste is perhaps slightly obtunded in the right anterior two-thirds of the tongue, but this is by no means certain, as taste is at most a matter of education, and is dependent not only upon the nervous integrity and individual susceptibility, but also upon the coated condition of the tongue and many other conditions.

It is perfectly certain that the posterior third of the tongue, supplied by the glossopharyngeal nerve, is not involved; and if the anterior portion of the right side is at all involved, it is of course produced by the chorda tympani branch of the seventh, which supplies the taste filaments in this region.

My incompetency to examine the optic or auditory field led me to trespass upon the kindness of my friend, Dr. Moss, who

courteously examined this patient for me and reported substantially as follows:

Vision and audition in left side perfectly normal. The papilla of the right eye shows very slight cloudiness, as if a choked disk from some former compression had existed, but had been removed, and the slightest sign of atrophy resulted; this, however, is very slight and not conclusive, and vision will probably be all right. The right ear shows excellent bone conduction, the equal of the left side, but air conduction is defective on the right, the drum being opaque and thickened and adhesions existing. He thinks this condition probably due to hemorrhage and the middle-ear inflammation following the injury.

One interesting phenomenon is the complete absence of the patellar tendon reflex on both sides—a symptom opening a field of specific infection.

Conclusion and Conjecture.—From this rather imperfect and hurried description it would appear that we are justified in concluding that this marked mental disturbance, and in fact the whole train of symptoms, are primarily due to the cerebral injury received in December, and from the appearance of the skull at this time we are justified in assuming that this patient suffered a fracture of the skull at the time of the fall, and that this fracture is located in the rear and base, probably involving the parietal and temporal bones, and that the fracture extends through the petrous portion of the temporal bone, involving by actual contact or pressure contiguity the internal auditory meatus, or preferably the Fallopian canal, through which the seventh nerve passes to its terminal distribution. It is questionable if the occipital bone is at all involved in the injury, and as the Rolandic area is free from motor and sensory disturbance, as manifested in the extremities, we are justified in assuming that no injury occurred to that portion of the brain, except perhaps the general concussion. We are also justified from the absence of patellar reflexes, from the enlarged lymphatics all over the body, from a spot of alopecia on the scalp, from a pigmentary spot indicative of a former chancre on the glans, and finally from the pupilary inequality and irregularity at time of admission, from the marked tolerance of large doses of iodide of potassium, and the subsequent improvement, in concluding that this patient has constitutional syphilis—that it is concomitant and coexistent with the cerebral injury and doubtless preëxistent, and that at least some of the symptoms of this case are probably traceable directly to the tertiary results of this infection. It is quite possible that both causes are operative, viz., the fracture and the infection.

The improvement manifested may possibly result from the absorption of a blood-clot due to the traumatism, and located at the basal cortex, but this I consider rather doubtful. Another possible contingency is pressure from a plastic meningeal inflammation, either traumatic or syphilitic, in the meningeal sheath of the seventh nerve. Perhaps rather a far cry from a scientific standpoint.

In regard to the facial paralysis, a possible conjecture resulting from Dr. Moss's findings is the extension of inflammatory processes from tympanic cavity to the Fallopian canal, and resultant compression about the facial nerve; this inflammation being due to the hemorrhage into the middle ear at the time of injury.

The Mental Condition.—The form of insanity is yet *sub judice.* From its course and characteristics so far I am disposed to call it a dementing psychosis, or what might be called a primary dementia, due to traumatism, rather than an attack of acute melancholia, although the fundamental tone is decided depression. At any rate, the course of the disease will determine what it is. If the former, it is quite likely that his mind will suffer continual and persistent deterioration, and complete dementia ensue, unless medical or surgical means arrest it.

Treatment.—Finding the lost patellar reflexes and glandular enlargement and some irregularity of the pupils upon my first examination, I felt justified in placing him upon experimental doses of mercury and iodide of potassium, to determine whether or not there might be specific lesions in addition to the traumatism. The mercury produced looseness of the bowels with abdominal pains, and was stopped after a few days. The iodide has been continued in increasing doses, till he is now taking 300 grains three times daily; no iodism has yet appeared, and there has been some improvement in his symptoms. Later Dr. Moody has added to his treatment tonic doses of nux vomica and chloride of iron. As he seems to be improving under this treatment, we have considered it advisable to exhaust its value before turning to anything else. If, however, this plan should fail, surgical interference is the proposition of choice.

It should perhaps be added that surgery was indicated at the site of the injury when first received, but since three or four months have elapsed, and with strong suspicion of specific infection playing an important rôle in the production of his symptoms, it would seem advisable to definitely determine the value of medicine now, and if failure result, and the mental condition shows no improvement, trephining should be done. It is certain, however, that no surgical means can reach or relieve the seventh nerve

if it be a fracture or depression through the petrous portion of the temporal bone, and unless the facial paralysis is due to syphilis and responds to specific treatment the lesion will remain, unless some compensatory function is performed by the fifth or other nerves. As the fifth pair supply the masseter and other muscles concerned in mastication, very little interference with the use of the mouth is to be expected.

If, however, the facial nerve paralysis is due to extension of the inflammatory process of the middle ear, and consequent compression, it is quite possible that iodide of potassium will relieve it, or at least that time and retraction of adhesions may promote well-nigh perfect recovery. While the superficial facial muscles are still dead to electricity, yet it seems to me I can see some slight evidences of improvement upon voluntary movements.

Another important proposition is: After the thorough use of mercury and iodide, if the mental disorder persists, are we to expect any improvement from trephining at the site of the skull injury? It is readily seen that this is not the seat of intelligence, judgment, will, or emotion, and as the great motor and sensory areas are not involved, and no focal symptoms of the eyes indicate irritative or destructive lesions of the brain tissue about the visual centers of the right occipital lobe, certainly in close proximity to the injury, what relief can be expected from operation, even if the displaced bones can be readjusted?

Again, if apparent recovery ensue under specific treatment, what part did the fracture and the brain concussion play in the rôle of physical and psychic symptoms, and are we to expect a return of these symptoms at some future date? If the cranial bone displacement is a congenital condition, the probability of which was suggested by Dr. Moss, but which I consider extremely improbable, and the mental symptoms be due to syphilis, made kinetic by the concussion, with present improvement, we are justified in prophesying almost perfect recovery for a time, with later return of the symptoms, unless prevented by attention to specific lesions of a tertiary character.

The foregoing account of this case was written on March 27, at which time Mr. G——'s mental condition still showed excitability, and complete paralysis of the right facial nerve existed.

Immediately after the reading of the paper at the San Antonio Medical Association he became excited, confused, and somewhat noisy, greatly wishing to describe his mental and physical state to the assembled physicians in a decidedly hysterical manner, and it became necessary to remove him from the building.

Within a few days, under continuation of his treatment, this

excitement all subsided, and his treatment has continued along the lines previously explained, except that the iodide of potassium has been increased steadily five grains at each dose, until at the last examination, on April 30, he was taking 520 grains three times daily, making a total of 1560 grains per day, the largest dose of the iodide of potassium of which I can find any record in my library.

He has never shown a single symptom of iodism, and about the only complaint is a burning of the throat at the time it is swallowed; and he also complains of some dizziness and occasionally slight nausea.

In spite, or in consequence, of this enormous dosage of iodide of potassium the patient has steadily improved, and has gained eight pounds in flesh. His mental excitability has almost completely disappeared. He is now perfectly rational and coherent in conversation, and his appearance and conduct at all times is that of a sane man.

There is slight evidence of the return of the patellar reflexes and marked improvement in the facial paralysis, as he can now close the right eye, which he could not possibly do thirty days ago, and the facial muscles are beginning to respond to the faradic current of two cells. His improvement has been steady and really astonishing, and seems to justify the original opinion that the specific infection had much to do with his mental disturbance, which was, of course, brought on by the fall and fracture of the skull.

I had not formerly believed that iodide of potassium could be borne in such enormous doses by any stomach, but one fact is worth a hundred theories, and the demonstration of his tolerance of the drug and of his constant improvement is sufficient to challenge further consideration.

I have suspected the possibility of the iodide passing unchanged through the bowels, as he exhibits a slight looseness of the bowels, especially at night, but have been unable to demonstrate this chemically.

It is said that the diphtheria antitoxin discovered by Professor Roux, of the Pasteur Institute, is now being made up in the form of lozenges for use during convalescence. The professor had observed that bacilli found in the mouths of patients several weeks after recovery were liable to convey the disease to others. The lozenges overcome this, and also render preventive inoculation unnecessary, it is said.—*Exchange.*

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EDITORIAL ARTICLES.

THE SEASON OF RECREATION.

The returning season of recreation directs attention to the needs of both doctor and patient in this direction. In old days our ancestors would have smiled somewhat incredulously at the so-called need of an annual vacation. They would doubtless have considered that they worked just as hard as any one, and in fact there is no possibility of calling in question the superb industry of the founders of the country, yet the vacation as it is known to us, and as an established institution in the life of the people, was to all intents and purposes unknown. The reason for this difference of necessity is usually attributed to the strain and stress of modern methods. The generation that preceded our own in the management of affairs did not go "the pace that kills." It took its time, and in fact could not hurry in the way it is possible for the modern man, who avails himself of rapid transportation and electrical transmission of thought so largely in the conduct of his affairs. Thirty or even twenty years ago men did not know how to amuse themselves as they do now. Athletic sports are largely a development of the last two decades. Golf is scarcely more than ten years old, as an amusement of wide-spread popularity, and the wealthy classes have only recently been accustomed to maintain country houses, or limit their business season to a certain number of months.

It must needs be that this general necessity for the vacation corresponds to some deeply-felt want in the individual. All classes have exemplified the demand for recreation. It is not a fad of the few, but a conceded requirement of the masses just as much as the classes. The continued strain and stress of modern life has been everywhere reflected, and the almost universal indul-

gence in the vacation is obviously the natural correlative of this storm and stress.

The lavish expenditure of vital energy which the necessities of modern life demand is not confined to any particular branch of activity. The financier seems to take his troubles a little more seriously than other mortals, and perhaps he represents in his age and day a type which is bearing the brunt of the burden, and feeling more than others the keenness of competition. Seasons of protracted rest are demanded in all intellectual pursuits, and among the callings in which a vacation is a much-needed requirement, the medical profession is preëminent. The exacting duties and responsibilities of the physician are such as to entail a high percentage of waste, and call for an equivalent compensatory period of repair. Every doctor needs his annual vacation, and should insist upon getting it.

The methods of recreation are to-day too many to mention. Change of air, which used to be considered the *sine qua non,* has now yielded to change of scene. There is fairly good air for ordinary inhalation and expiration purposes anywhere. It has been contended that a fairly satisfactory change of scene can be attained by changing the position of the furniture in a room and by repapering its walls. Some amount of change in sensory impulses may come from such a proceeding. The important thing, however, is the recognition of this need for change and variety in impulses that are perpetually streaming into the field of consciousness. If this fact be recognized the individual himself may be left to his own resources to devise means and methods of securing the rest and recreation which the conditions of modern life seem to make imperative. The city doctor may well take to the woods, and the country doctor to the cities. Intellectual stimulation is in the nature of recreation for those who may suffer from mental torpor. It is always well to remember that the nature of recreation is best defined in the strict terms of its etymology, and recreation is nothing if it be not re-creation.

EDITORIAL NOTES.

The Prevention of Rabies.

Dr. F. G. Novy, professor of bacteriology in the University of Michigan, has recently written and published in the *Teachers' Sanitary Bulletin* a very concise and interesting paper on rabies which is intended for popular distribution. The writer says that

upon discovery of rabies all dogs in the community should be muzzled for at least three months. Dogs suspected of having the disease should not be shot as is generally done, but if possible confined and watched until such time as a certain diagnosis can be made. Should the dog have been killed, its brain and spinal cord, having been carefully removed, should be tested by inoculation on other animals. Novy says that while waiting for a laboratory report much can be done by proper cauterization of the wound. "Experimentally it has been shown that of the infected animals fully 90 per cent can be saved if within twenty-four hours after the accident the wound is disinfected by a radical procedure." After cauterization of wounds inflicted by mad dogs, preventive inoculation should at once be resorted to, as this in Novy's opinion is of great value. The wide distribution of this valuable brochure is something that ought to be done, as its teachings will prove of great value to the community.

The Case of Mrs. Carlyle.

New light has been shed upon Mrs. Carlyle by Sir James Crichton-Brown's "Letters and Memorials." The unhappiness of the philosopher Carlyle in his marriage, and his neglectful treatment of his wife as described by Froude, is shown in a different manner. It is said that Carlyle was "a vigorous, earnest man with his keen susceptibilities; not easy to make happy, was wedded and was happy and made his wife happy in as full measure as the vials of their felicity would allow." Mrs. Carlyle, however, was highly neurotic, a victim to headaches, and she suffered from innumerable attacks of influenza. She had catarrhs of various kinds, was a victim of insomnia, and used morphine. Her life was a long disease. It is somewhat unjust on this account that Carlyle and his temper, however bad, should be called upon to explain all Mrs. Carlyle's conjugal infelicity. It is a medical case. Mrs. Carlyle had delusional beliefs, and doubtless tried the philosopher's patience at times to the utmost.

Antidiphtheritic Serum in New Form.

Drs. Roux and Martin, of Paris, have recently made the announcement that they are able to administer antitoxin in the form of pastilles, in which manner it is as effective as when given subcutaneously. Dr. Martin in a report made to the Academy of

Medicine said that the serum is useless for the destruction of the bacilli during the convalescent stage of the disease. During that period the throats of patients are still full of contagion, and it is due to this that the disease spreads. It is by direct contact of the pastilles with the throat that the bacilli are destroyed, an effect that is impossible to otherwise obtain. The value of this discovery lies in the fact that it will now be possible to care for patients suffering from this disease without fear of contagion.

Municipal Roof Garden for Consumptives.

A plan that is to be watched with interest has been inaugurated by Health Commissioner Martin of Philadelphia. According to his recommendations the roof of the Philadelphia Hospital is to be converted into a roof garden where poor consumptives may sleep during the warm months of the year. Part of the roof will be used as a workshop where patients may occupy themselves as much as they may be able. It is proposed to make the roof as attractive as possible by having flowers and shrubbery scattered about it. For the care of indigent consumptives who are unable to seek a change of climate or to live out-of-doors the plan is an admirable one, and if proven successful will doubtless be adopted by other cities.

A Simple Method for Producing Local Anesthesia.

A very simple method for producing local anesthesia, and one that will commend itself in the performance of minor operations, has recently been described by a writer in the *Lancet*. The method outlined is as follows: A solution consisting of adrenalin chloride 2 drachms, cocaine 5 grains, and water one-half ounce is prepared. Lint is folded into a pad of four layers, soaked in the solution, and placed under a positive electrode. A large negative electrode is applied elsewhere, and a current of from fifteen to thirty milliamperes is slowly induced and run for the space of from five to fifteen minutes. The surface may then be washed with ether, and superficial operations performed painlessly and without loss of blood.

ITEMS AND NOTES.

GOVERNOR BLISS of Michigan has signed the new medical practice act.

DR. B. ONUF has been appointed resident pathologist at the Craig Colony for Epileptics.

THE common council of Detroit on June 9 made an appropriation of $30,000 for general vaccination.

YELLOW FEVER has broken out at Progreso, Mexico, on the Gulf Coast. It is also reported to be prevalent in Yucatan.

THE one hundred and twenty-second anniversary of the Massachusetts Medical Society was celebrated in Boston on June 10.

PLAGUE in Chili is reported to have come in a cargo of rice from India. Eight cases and five deaths have occurred at Iquique.

THE State Board of Colorado held an examination for embalmers on June 6. Nineteen persons were examined, including one woman.

DR. NORMAN HARRIS, associate professor of bacteriology at the Johns Hopkins Medical School, has accepted a call to the University of Chicago.

AT the seventh annual commencement exercises of the Saginaw Valley Medical College, Saginaw, Mich., May 14, a class of thirty-four was graduated.

ALL the new $75,000 five-per-cent bonds issued by the University of Maryland have been sold. A new pathologic building will be erected this summer.

THE convention of the Nurses' Associated Alumnæ Association was recently held in Boston, and was attended by representatives from all parts of the country.

DR. WALTER CHRISTOPHER has resigned as professor of pediatrics in the medical department of the University of Illinois, College of Physicians and Surgeons.

BETWEEN December 27, 1902, and May 22, 1903, there have been 18,735 cases of smallpox with 617 deaths in the United States, as compared with 34,184 cases, with 1053 deaths, during the same period of the previous year.

In addition to his original gift of $150,000, James Stillman, of New York, has given $50,000 to be used in the erection of a ward for the treatment of Harvard students ill with contagious diseases, entirely apart from the main infirmary building.—*Exchange.*

The Indiana State Medical Society met at Richmond June 4 and 5. The name of the organization was changed to the Indiana State Medical Association, and the new form of constitution, as proposed by the American Medical Association, was unanimously adopted.

An official despatch from Pisco, dated May 20, says that there are no more cases of bubonic plague in that city. The Board of Health then declared Pisco no longer infected. The government has officially informed foreign nations that Peru is at present free from bubonic plague.

The recent elections in Spain resulted in the election of four physicians to the lower house and seven to the upper house of the Spanish parliament. Dr. Cortez, editor of the *Siglo Medico* and president of the Internal Medical Press Association, was appointed vice-president of the upper house.—*Exchange.*

The International Chemical Congress, in session four weeks in Berlin, adopted a resolution favoring an international agreement prohibiting the use of phosphorus in making matches, and requesting the international committee appointed at Paris in 1900 to communicate the resolution to the various governments.

There is only one German among the members of the Paris Académie des Sciences—Professor Robert Koch, who was elected in place of the late Rudolf Virchow. Of the other six foreign members Austria and America contribute one each—Suess and Newcomb; and England four—Kelvin, Lister, Stokes, Hooker.—*Exchange.*

According to official statistics which have recently been published there are in Finland 414 legally qualified medical practitioners. This does not include 52 medical officers of the Russian garrison. There are 31 dentists. The number of unqualified practitioners is given as 14, so that Finland would seem to be in the happy position of being almost free from quacks.—*Exchange.*

According to the Bulletin of the Health Department the death-rate for May, 1903—16.69 per 1000 of the population—is the highest since the abnormal rates during the period of the

World's Fair in 1894, and nearly one-fourth greater than the average of the last eight years. Pneumonia heads the list of mortality, being fatal in 646 cases out of the total of 2675 from all causes, or more than 24 per cent of the total.

The experiments which Dr. Wiley, chief of the Chemical Division of the Agricultural Department, has been conducting on a number of volunteers for the purpose of testing the effects of borax and other preservatives in food will be suspended on June 30, says *American Medicine*. The list of volunteers has fallen from 12 to 7, and there have been many complaints since warm weather began from the government boarders, who want a change of diet.

Congress is to be urged to provide for the erection of a monument in memory of Major Walter Reed, who discovered that yellow fever was spread by mosquitoes. The committee chosen to lay the matter before Congress consists of President Gilman of the Carnegie Institute, Professor Welsh of Johns Hopkins University, Professor Vaughan of Ann Arbor, General Sternberg, the retired surgeon-general, and Dr. George M. Kober, together with a number of army officers.

The International Association of Botanists, founded a year ago on the initiative of some Dutch botanists, has just held its first congress at Leyden under the presidency of Professor Geobel, of Munich. The foreign botanists were welcomed by M. van der Vlugt, member of the Second Legislative Chamber, and sometime rector of the University. Professor Chodat, of Geneva, replied. Both addresses were delivered in French, and the discussions were carried on in the same language.

Dollinger, of Budapest, has undertaken collective inquiry as to the number of cases of cancer in treatment October 15, 1903. The step was taken at the request of the government, and question blanks have been sent to all the physicians in the country. They are urged to take note of tumors in animals coming in contact with cancer subjects—dogs, cats, cows, and horses. The fate of persons previously operated on for the removal of malignant neoplasms is also to form part of the study.—*Journal of the American Medical Association.*

Dr. Walter Wyman, surgeon-general U. S. P. H. and M. H. S., made the following statement May 28: "Experiments in Southern Italy and New Orleans have shown beyond the least doubt that the mosquito is a pest breeder, carrying malaria

and even yellow fever from patient to patient. They also show that it is possible to kill the larvæ of the insect by means of the oil process. On Long Island Sound the tests instituted present identical results. It is believed the use of oil streams would do much good in destroying the mosquito and keeping down malaria."

A BERLIN physician of renown, believing that excessive practice at the piano is responsible in a measure for the alarming spread of nervous diseases, has instituted a campaign against beginning the musical education of children at the early age now customary both in this country and in Europe. In his opinion no girl should be permitted to enter upon the study of music before the age of sixteen, and even then the hours of drumming upon the keyboard should be restricted to two a day. Of 1000 girls who undertook piano practice before the age of twelve, 600 later became afflicted with some form of nervous disease, but of 1000 whose musical education was neglected only 100 ever suffered in this manner.—*American Medicine.*

FROM Manila, according to *American Medicine,* comes the following: Assistant-Surgeon Heiser says the number of cases of plague has been steadily increasing of late. With the view to preventing its spread to other parts of the islands and to the United States, it has been deemed necessary to fumigate with sulphur, in order to kill rats and vermin, the entire shipping which enters and leaves this port. This is a very large undertaking, and taxes the station force to its utmost limit. The Board of Health is coöperating on land in this matter. They have employed a number of rat-catchers, and pay a five-cent bonus for every rat delivered to them. In addition they contemplate inoculating every Chinese with Shiga's antiseptic serum.

THE Turin Academy of Medicine has awarded the Riberi prize of $40,000 to Professor Scalve for his successful anti-anthrax serum as the best work accomplished in the medical field during the five years since the prize was last awarded. In a recent communication on the subject Scalve stated, according to the *Journal of the American Medical Association,* that two hundred and ninety-three persons have been treated for malignant pustule reported by Sanfelice, in which the serum of dogs immunized against anthrax was used. Scalve announces that a rise of temperature after the injection is a most valuable sign, as it indicates a favorable prognosis as a rule. When the serum is used local treatment is unnecessary, and if administered in time the lesion

heals and the edema is spontaneously absorbed. He has found the best method to be a single large dose, slowly injecting 40 to 50 cubic centimeters at three or four points in the forearm or back of the hand. This serum treatment has found a cordial welcome in Argentina, where it has been applied in 130 cases, reducing the mortality to zero except in the moribund cases. Competition for the Riberi prize is open to the world, as previously announced in these columns, but preference is given to a work that tends to improve conditions in Italy.

Compulsory insurance of wage-workers against sickness has for some years been enforced in Germany. The sick fund societies, or "Krankenkassen," that assume the insurance, make contracts with physicians for medical attendance on their members at the lowest possible rates, sometimes absurdly inadequate. A new law is before the Reichstag now which increases the length of the maximum treatment from thirteen to twenty-six weeks, and requires venereal diseass also to be insured against. Hitherto the societies have ignored the venereal diseases. If this law goes into effect all the present contracts with the medical attendants of the societies will have to be modified to conform to the new conditions, or otherwise the work of the physicians will be vastly increased without any more pay. The profession throughout the country has been organized, and there is every prospect that the day the law goes into effect, July 1, the medical attendants of all the societies will refuse to continue their services until new satisfactory pecuniary arrangements have been made, and other physicians will not take their vacant places. In short the physicians have organized a general strike along the line of principle: "If you want peace, prepare for war." The societies have been counting on the usual inertia and lack of organization among physicians to accomplish their aims of the minimum of expense for the maximum of medical services, but the decided stand being taken by the united profession will undoubtedly have its effect and the contemplated strike not prove necessary. The strike at Mulhausen has been arbitrated and a temporary peace restored, but at Gers the conditions remain the same, and the managers of the societies are compelled to pay for medical attendance for their members at the ordinary rates for a physician's service or let them go without. As a minor matter the profession in Germany is working to introduce "the American plan" of free choice of the physician by the patient, and many of the new societies are organized on this basis.— *Journal of the American Medical Association.*

NEW PUBLICATIONS.

A TEXT-BOOK OF CHEMISTRY.

A new manual of chemistry is an event which will receive due attention at the hands of medical and dental students. This volume is written with the intention of providing something especially to meet the needs of students and practitioners. The chapter on the examination of the urine seems to be particularly well adapted to the needs of the professional man. The work is amply provided with illustrations and colored plates, and it will doubtless take high rank among authoritative manuals.

A Text-book of Chemistry. For Students of Medicine, Pharmacy, and Dentistry. By Edward Curtis Hill, M.S., M.D., Medical Analyst and Microscopist; Professor of Chemistry and Metallurgy in the Colorado College of Dental Surgery; Professor of Chemistry and Toxicology in the Denver and Gross College of Medicine, University of Denver. With 78 Illustrations, Including 9 Full-page Half-tone Colored Plates. Pages xii-523. Crown Octavo. Extra Cloth, $3.00 net, delivered. Philadelphia: F. A. Davis Company.

SURGICAL ASEPSIS.

The author of this little book seeks to demonstrate that surgical work can be done with safety in the home of the patient provided all the details of the asepsis be carefully carried out. The desirability of doing surgical work at the home of the patient is very often a great desideratum, and knowledge of the means whereby this can be done and still give the patient the full advantages of modern aseptic principles is something that will appeal to most practitioners. This work is exceedingly practical in tone, and will be appreciated by a wide circle of interested readers.

Surgical Asepsis. Especially Adapted to Operations in the Home of the Patient. By Henry B. Palmer, M.D., Consulting Surgeon to the Central Maine General Hospital. Ninety Illustrations. Pages vi-231; size, large 12mo. Extra Cloth. Price $1.25 net, delivered. Philadelphia: F. A. Davis Company.

THE EXPECTANT MOTHER.

This little book is one which presents many points of excellence, and describes concisely and succinctly the necessities of the preparturient state. It is full of suggestions for the care of the new-born child, and gives advice on the subsequent training and care of the child. It is written in an interesting manner, and appears in attractive form.

The Expectant Mother. A Treatise on the Care of the Expectant Mother During Pregnancy and Child-birth, and the Care of the Child from Birth to Puberty. By W. Lewis Howe, M.D. Price 50 cents net, delivered. Philadelphia: F. A. Davis Company.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Indications for Operation in Hypertrophy of the Prostate Gland.

The following indications for operative treatment in hypertrophy of the prostate are given by A. J. Ochsner (*Chicago Medical Recorder,* May 15, 1903).

Perineal prostatectomy is indicated in all cases of obstruction due to hypertrophy which cannot be relieved for any considerable period of time by hygienic measures and medical treatment. This is especially true in old men past the period of virility because in these cases it is not necessary to preserve the seminal vesicles. In younger patients more persistent efforts should be employed to obtain relief with non-operative treatment, and in case of operation the seminal vesicles should be preserved. In the presence of stone in the bladder complicating results from the obstruction due to enlargement of the prostate gland, the latter should be removed and the stone extracted through the perineal wound. The contraindications to the operation are: (*a*) acute infection; (*b*) advanced nephritis with or without pyelitis; (*c*) other coexisting conditions of sufficient importance to make any major operation unsafe. If possible, thorough preparatory treatment should precede the operation. This should consist in hygienic measures, rest in bed, drinking distilled water, irrigation of the bladder, and the administration of non-irritating remedies which have a tendency to render the urine sterile. In case the obstruction is complete and catheterization impossible because of the obstruction or on account of the resulting hemorrhage, immediate operation is indicated. The operation should be performed before patients have advanced to this condition.

Intestinal Resection.

Suture, according to J. H. Dunn (*Journal of the American Medical Association,* May 30, 1903), is the most indispensable and generally applicable method of anastomosis in intestinal resection.

The Murphy button is equally useful if not preferable, under certain conditions, but very inferior under others. For the end-

to-end union of segments of normal small intestines, or the end-to-side anastomosis of healthy small and large bowel, it gives results unexcelled by any other method. In unions of the larger intestine it is so far inferior to suture as to be practically contraindicated. Pathologic changes in the small intestine or its mesentery which render the perfect application of the button difficult, or such as would probably disturb the course of healing, should be united by suture.

Of suture methods that of Gregory F. Connell is incomparably the best; it is in reality the simplest—a single row of continuous suture, all within the gut, the most likely to be even, strong, and tight, with smallest and most even diaphragm. It admits of the easiest and most perfect dealing with mesenteric border, and is capable of a simple, invariable technique.

It is especially desirable to choose the fewest and simplest means compatible with the best work, because intestinal operations occur at rare and irregular intervals as emergencies in the hands of many surgeons, and the little conveniences which enter into highly specialized operations of repeated daily execution are for the most part worse than impracticable.

The Uses and Abuses of the Urethral Sound.

J. H. Dowd (*American Medicine,* May 16, 1903) says that when the urethra has been involved by inflammation, specific or otherwise, no instrument, and especially the steel sound, should be used until the urine is clear, excepting for shreds or floating particles. The urethra should in all cases be flushed with an antiseptic solution (formaldehyde 1:3000) before the passage of an instrument. Following its withdrawal an astringent should be used, preferably nitrate of silver 1 to 10,000. A sound should never be passed for at least three months following acute gonorrheal infection, and then only when the urine is clear. When dilatation of a stricture will answer, sound should be increased in size according to the tissue forming the pathologic growth and its location. True gonorrheal strictures of the deep urethra may be dilated first five to six numbers at each sitting up to 18 or 20 F. Following this two or three numbers should be the rule. In the case of traumatic gonorrheal stricture in the pendulous urethra, or when the sound is followed by marked irritation, etc., cutting gives the best result. When the contraction seems not to dilate without much force, weekly treatment being followed by considerable irritation, making the interval ten to fourteen is generally followed by the most gratifying results.

Stricture can be permanently eradicated. This occurs when after dilating the circular muscle of the canal no bloody string is found in the washings after four to six dilatations which have varied from one to four months apart.

The Treatment of the Common Clinical Forms of Gonorrhea in the Female.

Dr. R. O. Kerwin (*New York Medical Journal,* May 23, 1903) says we should always make a thorough examination of the region of Bartholin's glands in suspected cases. If these are infected, flush the sinuses and vagina with antiseptic solutions, make free incision of the sinuses and glands, remove diseased or necrosed tissues with a curette, and swab the entire surface with 50-per-cent argyrol solution, strong carbolic acid, or nitrate of silver. Argyrol is to be preferred because it is non-irritating and possesses deep penetrative power. Never use local treatment in an acute gonorrhea of the uterus, but put the patient at absolute rest and endeavor thereby to prevent the spread of the disease to the uterine adnexa and peritoneum.

MEDICINE.

Examination of Milk by the General Practitioner.

At a recent meeting of the Medical Society of the State of New York, Henry K. Shaw (*Annals of Gynecology and Pediatry,* May, 1903) read a paper under this title.

A scheme was outlined for a rapid, simple, and accurate method of examining either human or cow's milk. The importance of testing the acidity of the milk was dwelt upon. Milk with an acidity over two-tenths of one per cent is not fit for drinking purposes. The determination can be made either by a simplified titration method, or by the use of alkaline test tablets. The next step is to obtain the specific gravity. The author had a small Quevenne lactometer constructed with a thermometer. This is graduated from 1.020 to 1.050, and requires a little over half an ounce for a reading. Lactometers are standardized at 60° F., and the correct reading can easily be obtained when the temperature of the milk is known. The specific gravity of mother's milk averages 1.030, and it is lowered by an increase in fat and raised by a high percentage of proteid. If the specific gravity of cow's milk is less than the normal (1.029 to 60° F.) one of two things

may be assumed: either the milk contains an unusual amount of cream, or the milk has been watered. If, on the other hand, the specific gravity is higher than normal and the percentage of fat is low, it is fair to assume that the milk has been skimmed.

The percentage of fat is obtained in many ways, but the writer prefers the Babcock method. A small hand centrifugal machine was made for him which takes up very little room and uses the regulation size test bottles. This machine can be used for urinary and bacteriological work.

The percentage of sugar varies very little, and its estimation is not required in an ordinary routine examination. The quantitative Fehling test used for urinalysis can be used.

The total solids of the milk can be determined from the corrected specific gravity and the percentage of fat. The Babcock formula consists of dividing the specific gravity of the milk and adding to this one-fifth the per cent of fat. This will give the solids not fat, and adding the per cent of fat to this product, the amount of the total solids is obtained.

A sliding milk scale has been recommended by Richmond based on the formula. By it the correct lactometer reading and total solids can be ascertained at a glance without applying any mathematical formula.

The amount of proteids can be estimated approximately by subtracting the percentages of fat, sugar, and salts from the total solids.

The Hehner and phloroglucin tests are recommended for the detection of formalin in milk.

On the Sources and Manner of Infection of Typhoid Fever.

Wm. H. Welch at the recent meeting of the American Medical Association (reported in *Medical Record,* May 16, 1903) read a paper under this title. He said that there is no missing link in the chain of proof that the typhoid bacillus is the cause of typhoid fever. At present there is no positive or experimental proof that the origin of the disease can be through the respiratory tract; it can only arise from the injection of the typhoid bacillus into the alimentary canal. The bacillus is eliminated from the body through the feces and the urine, and in very rare instances it may be found in the sputum, but this is so rare as not to deserve consideration. He emphasized the importance of the knowledge of the bacillus being found in the urine of typhoid fever patients, even for a long time after convalescence has

become established. This fact is a very important one from a prophylactic consideration. Another important factor in the causation of typhoid fever is the dosage. The source of the infection is *the typhoid patient.* If one could prevent the typhoid bacillus from gaining an exit from the typhoid patient he believes that typhoid fever could be made to disappear from the world.

Dr. Welch referred to the experimental work of Reed, Vaughn, Shakespeare, and others, in which it was shown that the majority of the cases were not attributable to drinking-water, but to a direct transmission from one typhoid fever patient to another; in the cases of the soldiers the disease was transmitted by things about the tents, articles of bedding, etc., and they brought out the agency of flies and other insects in the transportation of the disease. The bacillus can be transmitted in various ways, but he believes that in many communities the solution of the prevention is likely to be found in the powdered infiltration, or sand infiltration. He thinks we are far behind the continental countries in this respect. Typhoid fever is occasionally traced through the ingestion of vegetables or raw foods; also through the dust in the air.

He also took up the consideration of the contamination of milk, occurring chiefly through the air or through the water used in washing out the cans. Milk, he said, is an excellent medium for the growth of the bacillus, and has been the cause of many epidemics.

Diagnostic Value of Blood-pressure Determination in the Diagnosis of Typhoid Perforation.

Geo. W. Crile (*Journal of the American Medical Association,* May 9, 1903) says the highest systolic pressure in uncomplicated cases, and with normal arteries, as measured by a Riva-Rocci sphygmomanometer in 115 cases of typhoid, was 138 mm. mercury; the lowest 74 mm.; the mean in the first week was 115, in the second 106, the third 102, the fourth 96, the fifth 98.

In twenty cases of acute peritonitis, recorded by the same observer with the same instrument in otherwise similar cases, the highest systolic pressure was 208 mm. mercury, the lowest 156, the mean 166 mm. The mean pressure of all the typhoid was 104 mm.

In five cases diagnosed typhoid perforation, in which blood-pressure determinations were made, four were verified either by operation or autopsy. The case not operated on was a typical one. The pressure rose from 116 mm. to 190 mm. during four

hours. The second case, a lad of twelve, was admitted to Lakeside Hospital in general peritonitis. Blood-pressure was 105; Widal reaction was positive. Immediately operation was performed, and a perforation disappeared. The blood-pressure fell to 80 mm. On the eighth day infection passed through the thinned wall of another ulcer, causing peritonitis; blood-pressure then rose promptly from 84 to 110 mm.

The third case, a patient in the ward at Lakeside, developed a slowly forming perforation; blood-pressure rose from 116 mm. to 165 within two hours. The pulse in the meantime had but slightly increased. At operation a small perforation and diffuse peritonitis were found.

The fourth case was that of a physician who entered Lakeside with general peritonitis; blood-pressure was 165. No operation. Autopsy revealed perforation and diffuse peritonitis.

The fifth case was one of typical perforation; blood-pressure 208 mm. At operation perforation and diffuse peritonitis were found.

The blood-pressure in the perforation cases assumed the high level attending peritonitis from other causes.

The Psychological Conditions of Development of Hypnosis.

P. H. Ribatoff (*Russky Vratch*, Feb. 1, 1903) discusses the nature of the hypnotic state. Hypnotic sleep, according to the writer, is a peculiar psychical condition characterized by the inhibition of the will and by heightened susceptibility to suggestion.

For the development of the hypnotic state mere influence of a physical nature (passes, fixation, etc.) are insufficient. Simple fatigue of attention does not lead to the development of hypnosis. Concentration of thought and attention on one subject does not by itself bring about hypnosis. A corresponding emotion is a necessary and constant factor in the development of hypnosis. This emotion possesses an entirely peculiar character and belongs to the group of phenomena of a complex type; it comes nearer in its nature to the emotion by outside influence. The existence of such an emotion is proved (*a*) by the change in the pulse and respiration during hypnosis; (*b*) by the subjective sensations of the hypnotized; and (*c*) by the manifestation of fatigue which follows hypnosis. All other conditions aid in the development of hypnosis only in so far as they help to bring about the corresponding emotion. The existence of the thought of hypnosis is not essential for the development of the hypnotic state (for

instance, it is absent in natural hypnosis). The thought of sleep during artificial hypnosis plays the rôle of a signal for the development of the emotional condition. The thought of sleep accepted by the person hypnotized as something real casts a peculiar impression on the external picture of artificial hypnosis. The external surroundings, the methods of inducing hypnosis, and the personality of the hypnotizer play the rôle only of conditions which facilitate the appearing of the hypnotic emotion.—*Philadelphia Medical Journal.*

Weakness and Dilatation of the Heart Due to Chronic Nutritional Diseases.

G. W. McCaskey at the New Orleans meeting of the American Medical Association (reported in *Medical Record,* May 9, 1903) presented a paper on this subject. He said that the various causes which act upon the heart do so in the following ways:

(1) A failure to supply sufficient nutritive pabulum to the heart muscles, because of a weakening of the complicated mechanism concerned in this accomplishment. (2) Through the chemical influence of retention products which are toxic in excess, and absorption of foreign substances, for the most part in the gastrointestinal tract. (3) Through the partial failure or perversion of the important phenomenon of innervation of the heart muscle. (4) The purely mechanic factor, which is operative from the moment when the cardiac muscle is unable to make an effective ventricular contraction against the resistance offered in the arteries. Slighter grades of dilatation are frequent in chronic gastrointestinal diseases and in all the severer forms of anemia.

The treatment consists in the removal of the primary disease, improved nutrition, rest, diet, graduated exercise, and, in the severer forms, cardiac tonics and saline carbonated baths. In conclusion he emphasized the favorable prognosis of dilatation of the heart in most cases.

Membranous Croup and Diphtheria.

J. A. Ellegood (*International Medical Magazine,* May, 1903) is of the opinion that there is no such independent disease as true croup. Pseudomembranous inflammation of the mucous membrane of the croupous or diphtheritic type, whether or not attended with or followed by paralytic sequelæ, is in the opinion of the author always caused by the Klebs-Loeffler bacillus in some phase of its existence. The bacillus is a facilitative saprophyte, the virulent and the non-virulent types are of the same genus of

microörganisms, and the non-virulent type is the same organism undergoing a kind of saprophytic state of existence which is interpolated in the life history of the parasitic bacillus.

The degree of toxicity manifested depends upon certain unknown vital conditions of that microörganism, upon the anatomic character of the part attacked, upon the degree of immunity possessed by the blood and tissues of the body on which it finds lodgment, and upon the effect on the specific germ and its toxins of associated bacteria and their products.

Isolated cases of diphtheria, or those which do not give rise to infection, are as frequent as the cases of membranous inflammation of the larynx in which the membrane is confined to that organ without giving rise to infection or to the constitutional symptoms of diphtheria.

Inability to find the specific bacillus in a small proportion of cases is due to faulty technique, the late stage in the disease at which the bacteriologic examination was made, unknown morphologic conditions of the microörganism, to the development of peculiar or unusual relation to staining reagents, to autolysis, or to the action of other bacteria.

Antitoxin when administered early in uncomplicated cases is an almost unfailing remedy, and is useful in all cases.

Albumoses in Exudates.

Umber (*Zeitschrift für klin. Med.,* Bd. xlviii) found in two cases of cystic growths of the peritoneum, albuminoses which in a neutral or slightly acid state were not thrown down by boiling, though they were precipitated by the addition of small quantities of acetic acid, and could be isolated by washing with acetic acid, alcohol, and ether. These bodies showed all the reactions of the albumin group; they contained no phosphorus, and were therefore not nucleoalbumins or nucleoproteids. In the molecular composition the nitrogen was relatively in excess of the carbon. By breaking up these substances with acid or trypsin a large amount of albumose was formed. Umber called these bodies serosamucins, and believes they are found wherever the epithelium is affected.

Modification of Huppert's Bile Test.

Nakayama (*Zeitschrift für phys. Chemie,* Bd. xxxvi) employs the following test: Five cubic centimeters of acid icteric urine is centrifuged with an equal amount of 10-per-cent chloride

solution for a short time, and the clear supernatant fluid is decanted; to this is added two cubic centimeters of a reagent consisting of 99 parts of 95-per-cent alcohol, 1 part of fuming nitric acid, to one liter of which has been added 4 grammes of ferric chloride; the mixture is then heated to the boiling point with repeated stirring. The reaction is evidenced by a marked green color, and if a little yellow nitric acid is added to this green solution it turns to a violet, and later red.

Physiology of Fetal Nutrition.

Veit (*Deutsche med. Wochenschrift,* 1903, No. 9) on the ground of his last investigations comes to the following conclusions regarding the nourishment of the fetus: The mother's hemoglobin is dissolved by hemolysins of the chorionic epithelium and carried to the child by means of the serum; inversely by the syncyteolysin in the erythrocytes of the mother the excretions of the child are dissolved in the maternal blood. Thus the two organisms are constantly interchanging substances. Changes in the quantity of the lysin-forming cells due to diseases of the uterus must naturally result in the disturbances of these two lysins.

Metabolism in Convalescing Animals.

Schwenke (*Archiv für exper. Path.,* Bd. xlviii) made some experiments on dogs which had been deprived of food for different periods of time, or had been subjected to injections of fever-producing substances which caused a decided loss in body weight, and found that the heat production by regular feeding during the time of convalescence is not noticeably different from that in health; at any rate it is certainly not reduced. In the healthy animal the oxidation of the food products is evenly distributed, whilst in the convalescent the oxidation of the albumins is retarded.

THERAPEUTICS.

The Treatment of Drug Eruptions.

G. Pernet (*British Medical Journal,* May 16, 1903) says that in the treatment of drug eruptions the first thing to do is to stop the offending remedy. But even then it must not be forgotten that the eruption caused by bromides and iodides may persist for a while. The next step is to eliminate the drug by way of the kid-

neys or bowels. Diuretics are therefore useful, and milk in this respect may be found valuable both as a diuretic and as a food which makes for intestinal elimination. It is an interesting point to remember that poisons not only act on the skin, but also on the mucous membranes lining the alimentary tract. Kulz has shown that when alkaline bromides and iodides are substituted for chlorides, the gastric juice becomes acidified by hydrobromic and hydriodic acid respectively, instead of hydrochloric acid. A certain amount of diarrhea in drug rashes should not be interfered with any more than we would suddenly stop a similar condition in albuminuria; it may be a natural effort of the body to get rid of the poison. The exhibition of diuretics and aperients will be governed by the general condition of the patient. It is well known that potassium iodide helps to get rid of arsenic and mercury by releasing them into the circulation.

But it is well to bear in mind that more harm than good may result from the employment of this method, as is well exemplified in the case of mercury; and that the sudden charging of the blood with the *fons et origo mali* may lead to an aggravation of the symptoms. It is also important not to push a drug which instead of ameliorating a morbid skin condition is doing the distinct contrary. In bromide eruptions, liq. arsenicalis is of assistance. The latter, given in association with the bromide, will usually in cases of epilepsy prevent the rash of the latter, but not always. The possibility of inducing arsenical keratosis and pigmentation must not be lost sight of. In epilepsy, Fere insists on the part played by intestinal catarrh in the development of bromide rashes; these were avoided, he found, by the use of intestinal antiseptics. When the drug is conveyed through the mother's milk, she must either stop the drug or the infant must be weaned and artificially reared. Locally drug eruptions must be treated on the same lines as other skin affections.

The Value of the X-ray in Superficial Epitheliomata and Tuberculosis.

W. L. Rodman and G. E. Pfahler (*Medical Record*, May 30, 1903) presented at the meeting of the Association of American Physicians recently held in Washington a paper under this title.

In studying 234 cases of epitheliomata, they had found 63 per cent to have been cured and 36 per cent much improved by the *x*-ray. To accomplish this the average number of treatments had been twenty-five, and the time occupied a little over eight weeks.

In rodent ulcer 43 per cent had shown marked improvement. The treatment in this type of tumor required more patience than in the foregoing. Of lupus vulgaris they had been able to collect seventy-five cases treated by the ray, sixty-five of which were reported cured. Here, again, the time had been eight weeks, but the treatments had been more frequent, viz., forty. Lupus erythematosus, curiously enough, was shown to be just as difficult to cure. In general, the final results compared most favorably with other methods of treatment. In tuberculous glands the rays had been used in ten cases, with favorable results in all, but it was in Hodgkin's disease that the most startling revelations were produced by this form of treatment, a number of cases having been recorded in which glands very deeply placed had speedily disappeared.

So far as the action of the rays is concerned, very little is as yet known about it, but certain it is that in addition to the blood-vessels closing, elastic tissues develop in the surface at a rapid rate. He said the question of personal idiosyncrasy to the rays is not a matter to be passed over lightly, because dermatitis and loss of hair had taken place in one patient who was exposed a single time to a tube under exactly the same conditions as another patient who had been treated for two and a half years with great regularity. He concluded that, for the treatment of slow-growing and not highly malignant tumors of the face, the rays are indicated because of their efficacy and excellent cosmetic effect. In lupus they are practically a certain cure. Under other conditions, however, the rays are simply an adjuvant to older methods of treatment.

The Treatment of Burns by Picric Acid.

G. R. Gilbert (*American Journal of Surgery and Gynecology*, June, 1903) says that we desire a treatment for burns and scalds, etc., which will be analgesic, antiseptic, keratogenous, and which will not adhere to wounds or ulcers, and which leaves scarcely any scar tissue. We wish something stimulating, especially in ulcers. The oily or greasy preparations, whether antiseptic or not, adhere to wounds unless changed two or more times daily. There are many excellent healing remedies now used for burns and ulcers, but they nearly all stick to the surface. A wet dressing seems to be the ideal; a wet dressing which remains wet seems better. Therefore an impermeable material such as oiled silk is indicated. It can keep a dressing moist three days. If left longer it becomes a dry dressing, therefore a reason for frequent

or daily change of dressing. Now as to what wet dressing is best many things might be used; but to meet all requirements, picric acid, or possibly even a normal salt solution, would fill the bill. Picric acid, being more antiseptic than the salt, is preferable. The objections are really not as serious as the adhering and therefore the pain-producing properties of greasy or oily dressings. Some medicines are bitter to the taste, but we would not decline to use quinine on that account in malaria, nor bitter tonics when needed. So why reject picric acid if its only real objectionable quality is the staining effect?

Physical and Therapeutic Value of Cathode and Ultraviolet Rays.

Roswell Park (*Medical News,* May, 30, 1903) says that the rays afford methods of treatment for extremely new growths of limited area and superficial character, which, while not exactly certain, are extremely promising. They not only cause no pain, but tend to relieve pain, both superficial and deep, in a most pleasing and satisfactory way. They are adapted to cases which can hardly be submitted to any other method of treatment, and they afford more hope in delayed or inoperable cases than does any other method of treatment. It will be found that the odor of putrefaction may often be suppressed by their use and the putrefying process itself checked. Burns and intense dermatitis, so frequently noted when the treatment first came into vogue, may now be almost certainly avoided. More than this, they afford a supplementary method of treatment after operation, by which the benefits of the same may be enhanced and enlarged. It is not necessary to intermit such work as the patient may be engaged in, in order to carry out the *x*-ray or phototherapeutic method of treatment.

Gelatin in the Treatment of Hemophilia.

Hesse (*Therapie der Gegenwart,* September, 1902) reports an interesting case of hemophilia which he treated by the internal administration of gelatin. The boy, eight years old, giving a hereditary history of a bleeder, suffered from frequent nosebleed, and short walks or other exertions would cause hemorrhages in the joints. He was treated with baths, iron, cod-liver oil, etc., without effect. For half a year he received 200 grammes of a 10-per-cent solution of gelatin daily. The result was a good one, as the boy can now take the severest exercise, and no hemorrhage has evidenced itself for over a year.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
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Endogenous Infection as a Cause of Eye Diseases.

J. V. Zelentovsky (*Russky Vratch; Philadelphia Medical Journal*, June 6, 1903) presents the following conclusions based on experimental data:

(1) The normal metabolism of the aqueous humor, its unfavorable effect on the development of bacteria, and the rapid phagocytosis are factors which prevent endogenous infection of the anterior chamber. (2) The posterior chamber as compared with the anterior presents more difficult conditions for the penetration of bacteria which circulate in the blood, but also more favorable conditions for their development. (3) Irritation and traumatism favor the penetration into the aqueous humor and lens of even slightly pathogenic bacteria which may circulate in the blood, and which do not penetrate the aqueous humor and lens under ordinary circumstances. (4) Severity of the general infection favors penetration of bacteria into both chambers of the eye. (5) Greater or less severity of endogenous infection of the eyes during the same general or local infection is, in all probability, determined aside from the virulence of the microörganism by the primary nidus of infection of the eye—*i.e.*, whether the anterior or posterior chamber is primarily involved. If the first the disease is mild, while if the second the affection is of a severe type. This supposition is supported by pathological findings. (6) From this standpoint it becomes clear why endogenous suppurative affections are so rare. (7) Endogenous infection evidently plays no rôle in the production of sympathetic inflammations.

The Great Value of Drainage and Ice in the Early Stages of Mastoiditis.

At the recent meeting of the American Medical Association S. H. Snow, of Syracuse, read a paper under this title. He said that the early stages of mastoiditis are replete with opportunities for doing work that will not only give the patient much relief, but save him from many dangers.

In the writer's hands a free incision of the drumhead is very efficient, if a small but strong knife be used, so that the tissues

can be laid open to the bone as the blade comes out along the posterior superior wall.

The drainage secured in this manner is in even very severe and sometimes advanced cases sufficiently free to induce a prompt abatement of active inflammatory symptoms.

Such an incision is indicated as a preliminary to the external work, and will often make it unnecessary for us to resort to more extreme measures; and especially is this true if thorough after-treatment be given to subdue inflammatory action.

Constant cold by the Sprague ice-bag is deemed by the author to be the best antiphlogistic, and safe in quite advanced cases, if the tympano-Wilde's opening mentioned be free and kept free until inflammatory action subsides. Such treatment continued three days after removal of all active symptoms prevents relapses. Improvement is usually noticed within twelve hours; if delayed beyond thirty-six the external operation is indicated.

In no event can a careless observation of these cases be justified, and abortive attempts must always be prompt and thorough and followed by improvement.

To rely upon these measures it is necessary: (1) that it be an acute case without symptoms of intercranial involvement; (2) that the patient remain within easy reach; (3) that drainage be maintained by supplementary incision if necessary; (4) that the nursing be intelligent and faithful so that the ice application shall be constant.

An Operation for Primary Divergent Strabismus.

Dr. W. B. Marple (*Archives of Ophthalmology*, June, 1903) at a recent meeting of the New York Academy of Medicine related the details of an operation for primary divergent strabismus.

The operation consists in a tenotomy of both externi (several millimeters back of the attachment of the tendons), followed by forced adduction of the eyes for twenty-four hours by an adducting suture. The characteristics of the cases in which this operation is indicated are: (1) Absolute and constant, not periodic or dynamic divergence; it is absolutely unsuited to cases of secondary divergence. (2) Good motility inward. (3) Often associated with a high degree of mycopic anisometropia or unilateral amblyopia. Both externi are operated upon at one sitting. In cases of divergence of not more than two millimeters the tendons are divided at their points of insertion. Whenever the deviation measures more than two millimeters, the tendons are divided at a distance from their insertion corresponding to the degree of the

squint. The conjunctival wounds are closed by a few interrupted sutures placed horizontally. A silk thread is passed through the conjunctiva over both interni muscles, in a line with the horizontal meridian of the cornea, and tied over a pledget of cotton on the bridge of the nose, which is left for twenty-four hours. Sutures introduced in this way are to pull the conjunctiva out through the palpebral fissure. In his cases he introduced them near the cornea at its temporal limbus and did not tie them quite so tight. He also excised the stump of the muscles. Simple myotomy without the forced adduction is not sufficient. In each of his cases after the double myotomy there was still divergence. There is apt to be considerable pain as long as the adducting suture is left in. This ceases as soon as the suture is removed. The cosmetic result is excellent, for the region of the caruncle is left undisturbed, which is a great advantage.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
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The Etiology, Pathology, and Treatment of Puerperal Sepsis.

H. M. Vinberg (*American Medicine,* May 3, 1903) concludes: (1) Severe puerperal sepsis may be caused by a variety of pathogenic germs. The variety of germs found in the uterine discharge in a given case is no criterion of the severity of the case, and forms no safe guide as to prognosis or as to the treatment to be adopted. (2) Bacteriologic examination of the blood is of little value, either from a prognostic or therapeutic standpoint. (3) The treatment of puerperal sepsis must be based chiefly upon the clinical history and physical signs of each individual case. (4) Wounds of infection in the perineum, vagina, or cervix are to be treated on general surgical principles of irrigation and drainage. (5) Curettage is indicated when there are evidences of placental decidual residue in the uterus independent of the variety of bacteria that may be found in the uterine cavity. (6) In those rare cases in which adherent and sloughing placental tissues cannot be removed either with the sharp curette or fingers, hysterectomy is indicated, providing the patient is not already moribund. (7) Hysterectomy is also indicated in septic endometritis, or infection of the placental site, so long as the infection is

still limited to the uterus; and when the symptoms are steadily growing worse, in spite of uterine irrigation with or without curettage and appropriate treatment, the abdomen should be opened. (8) In abscess of the uterus the abdomen should be opened, and when feasible the purulent foci are to be drained and the uterus preserved. If the uterus be studded with small abscesses, hysterectomy is indicated. (9) The abdominal route is to be preferred to the vaginal route for hysterectomy. (10) If the infection passes from the uterus into one or other tube and sets up a violent grade of inflammation, the abdomen should be opened and the infected tube be removed before a general peritonitis develops. (11) When the infection passes through the uterus and sets up a general peritonitis, a patient may occasionally be saved by a timely abdominal section and drainage. (12) In cases of parametric exudates the treatment should be of a conservative nature, and surgical intervention is indicated only when there are evidences of pus formation. (13) In obscure cases in which the pathologic lesion cannot be determined, and the symptoms are steadily growing worse, it may be advisable to open the abdomen to search for a hidden purulent focus, or for a circumscribed slough of the uterus. (14) The procedure proposed by Trendelenburg, and executed by him and others, of ligating the pelvic veins when they become infected and thrombotic, is worthy of further trial.

Deciduoma Malignum After the Menopause.

F. J. McCann (*Journal of Obstetrics and Gynecology*, March, 1903) reports a case of deciduoma malignum occurring after the menopause.

The patient was fifty-three years of age and had borne ten children. Menstruation ceased eighteen months before her admission into hospital on March 21, 1902, and during twelve months there was no loss of blood. In October, 1901, a sudden gush of blood came from the vagina, and the flow continued for one day. The hemorrhage recurred every four or five days until three weeks before admission, its severity being such that the patient was confined to bed during the flow. On examination the uterus was enlarged to about the size of a three-months' pregnancy, was uniform and soft in consistence, and freely movable. On passing a sound into the uterus under chloroform blood literally poured out, and a gauze plug was employed to check the hemorrhage. Two days later vaginal hysterectomy was performed, and though the patient rallied from the operation her sub-

sequent progress was unsatisfactory, and death occurred on the sixth day from suppression of urine. On cutting into the uterus the whole cavity was found to be filled with clot, some recent and some of old standing, while the uterine wall was intensely vascular; there was no evidence of new growth in the clot. Sections cut at different levels demonstrated the existence of new growth between the clot and the uterine wall, and some cells penetrated the wall. The growth was composed of multinucleated masses of protoplasm, and of a loosely reticulated tissue containing in its meshwork rounded cells with deeply staining nuclei. The remainder of the section was composed of fibrin and blood-clot. The Pathological Committee of the Obstetrical Society of London reported that the specimen was undoubtedly an example of deciduoma malignum.

Puerperal Eclampsia.

Partridge (*American Journal of Obstetrics,* March, 1903) enjoyed unusually good opportunities for studying this condition when recently house physician in the Lying-in Hospital, Providence, Rhode Island. That institution was specially made use of for the worst complications in obstetrics, so that Partridge attended no less than nineteen cases of eclampsia in 694 labors. Of the nineteen cases, fifteen, or 78.9 per cent, were married; five, or 20 per cent, single. Nine, or 47.3 per cent, were primiparæ; and ten, or 52.7 per cent, were multiparæ, contrary to the proportions taught in text-books, where primiparæ are the subjects of eclampsia in 70 per cent of all cases. The average age was twenty-seven years. Of the nineteen mothers, five died, a mortality of 26.3 per cent. Of the seventeen children living *in utero,* two died, a mortality of 11.7 per cent. In two of the nineteen cases the child was macerated when delivered. As to date of onset of the convulsions, in thirteen cases they set in before labor (68.4 per cent), in four during labor (21 per cent), and in two after labor (10.5 per cent). Of the five fatal cases four died before labor, one after, but none during the process. There was no case of twins. In eleven cases (57.8 per cent) the convulsions ceased with delivery, in three they seemed to increase. In the five fatal cases the average number of convulsions was 9.4, and in the fourteen which recovered 7.9. In every case the urine contained albumin, and there was more or less edema. In only one was blood found in the urine. Most of the convalescents showed traces of albumin in the urine when discharged, but without casts. Unfortunately, a necropsy was not permitted in any of the fatal cases, nor were the chemical constituents of the urine carefully analyzed.

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ORIGINAL CONTRIBUTIONS.

OCULAR EVIDENCES OF KIDNEY AND LIVER DISEASE.

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While the title of this paper promises to keep the matter within the limits of renal and hepatic pathology, it is impossible, if it were desirable, to present an array of statements bearing on the subject and cut out what might relate to other things. After all it is the general condition—the nature of the disorder with reference to general consequences as concerns the patient—that we as physicians are seeking, rather than the finding of something that will furnish a name for the trouble.

Intelligent treatment is based on the nature rather than the name of a disorder; therefore every means that promises definite information concerning actual conditions is the quest of modern medicine and surgery. To this end we invoke the assistance of every branch of knowledge and draw on every science for such material as may be useful in the line of our labors. To-day is the best day; this time the most efficient time in the history of medicine. We have at our disposal splendid facilities for enhancing the utility of our profession, and the efficiency of any practitioner of medicine is now a personal question merely.

The rapid expansion of knowledge pertaining to medicine has necessitated division of labor to insure attention to essential detail. The various departments known as specialties in the practice of medicine being therefore consistent elements of one great body, they should be well organized and neighborly, and keep each other posted as to how things of common interest appear when viewed from the other side of the division fence.

From the ophthalmological point of view diseases of the kidney and liver are manifested through disturbances in the vascular and nervous systems. The great importance of vision to the purposes of the individual makes of any marked ocular dis-

order good cause for seeking medical advice. For determining general conditions the eye possesses the special advantages of superficial position—high state of organization, delicacy of structure, intimate relation to central nervous system, and the possibility of actually seeing (by aid of the ophthalmoscope) arteries, veins, and the peripheral expansion of a nerve of special sense, all active and at work (and barring local disease), presenting a fair and honest sample from which may be determined the general condition of the vascular and nervous systems at large., Needless to say, the mere possession of an ophthalmoscope does not insure on the part of its owner ability to interpret the findings or even the ability to find the elements for interpretation, any more than does the mere purchase of a microscope constitute proficiency as a pathologist, or the possession of a library imply a well stored and competent mind on the part of the possessor.

(I will here admit that the foregoing statement does suggest a justly tabooed trick of which specialists are accused, viz., suggesting in their papers and discussions the necessity of sending to them every patient who aches or itches in the part peculiar to the practice of that particular specialist. Such, I affirm, is not the motive inspiring my plea for attention to ocular symptoms; yet the intrinsic meaning amounts practically to the same thing, unless one adopts the implied alternative of qualifying himself for the exercise of competent observation along the lines suggested.)

It has been my privilege to meet a good number of general practitioners who were proficient interpreters of ocular evidence, and who acquired this accomplishment after they became "busy practitioners." Of course, it may have been at the cost of neglecting the wise vaporings of current medical literature (at $1 per year and upwards), or repudiating their obligations to "sissiety." The training and knowledge of detail essential to utilization of ocular evidence is after all no great burden, and for the edification of such as may have time to spare between patients, and those who, though very busy, have conscientious scruples that forbid referring cases to specialists, I will suggest an outline of the essential qualifications:

1. Knowledge of ocular anatomy and physiology (with reference to its nervous and vascular relations rather than to its special function of vision).

2. Familiarity with normal appearance and such variations from the typical as are apparent, yet not pathological.

3. Ability to exclude abnormalities that are of congenital or purely local origin.

The above, of course, includes ability to use the ophthalmoscope.

What might be called "open and above board" evidences often point to disturbed renal and hepatic function. Nephritic edema of the eyelids needs but to be mentioned, likewise the saffron-colored conjunctiva of jaundice. The so-called rheumatic or lithemic inflammations of the ocular structure may generally be traced to disordered kidneys. Repeated hemorrhages beneath the conjunctiva may be the heralds of diabetes or announce the vascular degeneration incident to chronic nephritis.

Rapid opacification of the crystalline lens always indicates examination of the urine, and if it occurs in both eyes simultaneously in a person under forty-five years of age, is almost pathognomonic of diabetes.

Impaired functions of the eyes without objective evidence is often suggestive of delinquency on the part of our poison eliminators. Amaurosis—blindness—which has been described as a condition in which neither the patient nor physician can "see anything," is sometimes the announcement of most serious disease of the kidneys; violent blindness frequently accompanies albuminuric retinitis.

Of the muscular asthenopias, exophoria from insufficient converging power often expresses diminished functional power of the whole muscular system, resulting from kidney insufficiency, and may lead to the detection and correction of functional disturbances which, if neglected, would result in organic disease.

Since the intelligent public has become educated concerning ocular headache, the uremic headache often brings the sufferer for examination of the eyes. Here I will remark to my ophthalmological colleagues the necessity of exercising caution, lest a refractive error be counted as the sole and sufficient cause of a headache, when it may be at most a mere accessory thereto. As a horrible example I shall briefly report a recent case: The patient was wearing spectacles and taking acetanilid for his headaches. The glasses (I am pleased to say) were prescribed by an *optician*, and the headache tablets by a druggist. Failing vision drove him to an oculist, who, finding a retinitis with copious exudate, numerous retinal hemorrhages, and urine showing 11 per cent albumin (Esbach), prescribed adjustment of the patient's worldly affairs. Announcement of the funeral appeared five days later. The optician and the pharmacist had exerted their skill to the utmost, while the oculist had done little better than to pull down the black cap for the poor fellow whose nephritic headaches had been counted of ocular origin, until the ocular lesions of kidney

disease secured an ante-mortem diagnosis (to say nothing of the promptly fatal prognosis).

The most definite ocular evidences of general disease are secured ophthalmoscopically. The delicately organized structures of the fundus constitute a sort of barometer that may furnish to any one capable of reading its dial information as to the state of the weather prevailing in the distant provinces.

While we do not claim that many (if any) of the retinal lesions are absolutely pathognomonic of diseased kidney or liver, they do with few exceptions mean the existence of a serious general condition and greatly facilitate further search.

Even the so-called characteristic appearance of albuminuric retinitis should be confirmed by analysis of the urine, because, unless supported by other evidence, the retinal lesions resulting from a former acute nephritis incident to scarlatina or pregnancy might lead to error. On the other hand, the presence of retinal changes suggesting kidney disease calls for careful and sometimes long-continued observation of renal function. It should not stop with failing to find albumin in a single sample of urine, because of the fact that in chronic nephritis, of the type known as interstitial, albumin may be absent for considerable periods of time, yet the patient be living as "under a sword suspended by a thread." Ocular evidences of nephritis when unaccompanied by albuminuria will often be sustained by finding sharp accentuation of the second heart sound. Very strong support is this, when resistance to circulation in lung and liver can be excluded. With such findings, repeated examinations of the urine will almost certainly result in confirming the diagnosis of interstitial nephritis.

Time will not permit a detailed description of the various intra-ocular lesions; and furthermore, such a description would be superfluous in view of the abundant information obtainable from the modern medical text-books.

Our purpose is not to assume the rôle of instructor, but rather to call attention to an efficient aid in the recognition and management of certain grave disorders.

The brick-colored optic disk, resulting from increased arterial tension, suggests the question, what makes the increased tension? The answer is sought by listening to the heart sounds, asking about muscular rheumatism, occupation, and diet, and requesting a sample of urine from the accurately measured kidney output for twenty-four hours. Not infrequently this hyperemia of the nerve head will lead to the discovery of a nephritis long before its presence would be suggested by the more commonplace symptoms.

Likewise, marked tortuosity and apparent variation in caliber of the retinal vessels, retinal hemorrhages, edema, exudation, and patches of degeneration, all point to disordered excretion or some break in the machinery of general metabolism.

In various ways ocular evidence may be called into service, as in a known case of nephritis, accompanied by ocular disturbances, the nature, extent, and progress of the retinal lesions furnish accurate information as to the progress of the disease; rapid absorption of hemorrhages being a favorable indication, while a steady increase of the effusion with the appearance of exudation and degenerative changes practically amount to a death warrant, which, with very few exceptions, will be executed any time within two years. Exception to this rule is sometimes presented by albuminuric retinitis of scarlatina; while that occurring in consequence of pregnancy should be considered entirely apart as a distinct type.

Associated with nephritis incident to pregnancy, retinitis constitutes an exception to the rule applicable to other types, the prognosis both as to life and vision being less gloomy. It is also a valuable indicator as to the necessity of inducing premature labor. Occurring in the early months of pregnancy it furnishes ample justification for interference; and if it be extensive and accompanied by numerous retinal hemorrhages, emphatically demands the immediate termination of pregnancy. After the sixth month the occurrence of albuminuric retinitis is less imperative as an indication, and may be temporized with if closely watched as to progress. If it does not involve the macular region, and tends to subside rather than to progress, and the elimination of urea keeps above the danger line, we may wait for full-term delivery, or at least for the period of reasonably safe viability of the child, meanwhile being ready to induce labor on short notice should the macular region be encroached upon or other evidences of progress of the retinal lesions appear.

We must also remember that silence of the patient as to failure of vision is by no means a positive negation of albuminuric retinitis; for so long as the macular region is not invaded vision may remain good, while extensive and irreparable mischief proceeds unnoticed in other parts of the retina.

Diabetes of hepatic origin is frequently responsible for retinitis. Some observers describe a type of hemorrhagic retinitis which they claim is pathognomonic of diabetes. Xanthopsia (yellow vision) is sometimes an early symptom of catarrhal jaundice.

We must also bear in mind the fact that that pathological

state manifested by symptoms referable to the kidney or liver is not necessarily of renal or hepatic origin. Lesions of the central nervous system may cause an albuminuria or a glycosuria, with other symptoms tending to convict the kidney or liver as the chief and primary offender. Such an instance once came to my notice in the person of a woman who sought the aid of spectacles in the hope that it might improve her rapidly failing vision. She brought a letter from her physician, stating she had diabetes. The ophthalmoscopic examination found choroiditis in both eyes, and the suspicion of its syphilitic origin was abundantly confirmed by the roundabout method of eliciting history; and notwithstanding the fact that both she and her husband were of unassailable reputation, the glycosuria disappeared and the choroidal inflammation subsided under large doses of potassium iodide.

Brain tumor frequently disturbs the normal performance of kidney and liver functions, and here again we may find in the choked disk, the disturbed vision, or faulty behavior of the motor mechanism of the eye, directions that will lead through the secondary renal or hepatic disturbance to the primary cause of the trouble, which, needless to say, is essential to the purpose of the doctor, whose business it is to cure the ills of those who seek his services.

A RARE CASE OF SEXUAL PERVERSION.*

BY C. C. GODSHAW, M.D., LOUISVILLE, KY.

On December 10, 1902, I was called to see Mr. N. N——, and upon examination with a silver probe a foreign body was detected deeply embedded in the right buttock. Dr. Charles Farmer was called in consultation, and administered chloroform. We were assisted by Mr. DeWitt Wolf, a senior medical student at one of our colleges. We went prepared to enlarge the original wound, cutting down through the gluteal muscles if necessary, but to our surprise succeeded in removing in the following manner a piece of reamer or brooch three and five-eighths inches in length and firmly embedded five inches from the external opening, which was conical in shape and not larger than the usual surgeon's silver probe: The smallest size hemostatic forceps were forcibly introduced, like an obstetric forceps, passing the right then the left blade, after which they were locked upon the piece of metal and it was quickly withdrawn. The wound was treated antiseptically

*Abstract of a paper read before the Kentucky State Medical Association, Louisville, Kentucky, April, 1903.

before and after the operation, and in a few days the patient was up attending to his usual avocation.

This foreign body was broken off and remained in this fistulous canal twenty-four hours before surgical aid was summoned. The patient did not seek help on account of pain, but from personal fright, anxiety of his family, and the consequences which might arise if this instrument of pleasure were not removed.

The opening of the wound was located near the middle of the buttock, about three inches above the right gluteal fold. The external orifice was about half an inch diameter, conical in shape, and depressed to the depth of one-quarter inch, and umbilicated. The marginal surface of the external opening was completely healed, and the only raw and sensitive surface, so far as could be ascertained by the examination, was the bottom of the fistulous tract, and this is attributable to the slow method of self-infliction. There is no doubt that the other portion of this fistula, which was five inches in depth, was thoroughly calloused and almost insensitive to pain.

This fistula, made by the instrument at the hands of the patient himself, extended in a direction downward, forward, and inward, midway between the tuberosity of the ischium and the rectum, producing a blind external fistula.

There was a similar wound on the left buttock, produced in the same way, but this was much shallower than the one on the right side, being only about two inches in depth.

It is remarkable to report that there was no discharge from these wounds, except that there exuded from the one on the right side a few drops of blood, which I believe came from the bottom of the fistula, due to his having pushed this brooch further into the canal than had been his custom, and from the violence used under the intense sexual excitement causing the instrument to be broken off during the act.

After removal of this piece of metal, naturally my curiosity and sympathy were aroused, and after close interrogation and the use of much tact and persuasion the following scientific and interesting history was elicited.

The patient is aged sixty-three years; nativity German; occupation clock repairer; married. Has three grown daughters, all healthy; two of them are married, and he is the grandfather of several normal grandchildren. The remaining single daughter is a bright and pretty saleslady and an accomplished musician. The patient's wife, an aged, healthy, industrious, and sensible woman, is conscious of her husband's weakness, which is the source of much worry and grief, but she is powerless to control it.

The patient is the youngest child in his family; he never knew his parents; was reared by strangers. He emigrated to this country when twenty-eight years of age. It was learned that the patient's father died away from home, when the patient was but one year old; cause of death a violent accident, probably suicide. Cause of mother's death, and her age, unknown; it is reported she was delicate and of a nervous temperament. Two sisters of the patient were born mutes and died when quite young. He has one living brother, an old bachelor, aged seventy-four years, who has always been stubborn, peculiar, and of a nature easily aroused.

This patient weighs about one hundred and fifty pounds, height five feet four inches, muscular frame, large square shoulders, and short limbs with peculiar gait. His genital organs are normal. His head and features are unusually large and present a neuropathic appearance. His intellect appears above the average, and he is industrious and temperate in his habits. He seems otherwise sane and natural, and is extremely sensitive when approached in regard to his weakness. He is devoted to his family, especially so to his grandchildren.

For the greater part of his married life he has had his own bed in his workshop, where frequently during the day and often at night he mutilates his person as described to excite his lustful pleasures. He was sexually hyperesthetic in early childhood, and practiced masturbation from long before puberty up to his thirtieth year. When quite young he found upon pricking himself with sharp instruments or needles he suffered no pain, and experienced therefrom the most intense sexual pleasure, followed by ejaculation of semen. He had an aversion for coitus when unmarried, thinking it unclean, and preferred masturbation and the self-infliction of pain by means of sharp instruments to gratify his lustful imagination.

When thirty years of age he married, hoping to abandon his vicious habits; he found that he was not impotent, yet from weakness and lack of will-power could not break himself of this psychopathological infirmity, and in the secret of his own room for more than twenty-five years has mutilated his own person.

For many years he has most violent headaches and has suffered from insomnia, and could take with impunity sixty grains of chloral at one dose. He confessed to me a few days ago that he continued to follow the same practices with the most satisfactory sexual joy and gratification.

I shall not enter at length into the etiology, pathology, or treatment of psychopathia sexualis. We know that frequently the

insane and mentally irresponsible injure and mutilate themselves even unto death. Again, there are many cases, from a medico-legal aspect, where persons recognized as sane inflict self-punishment simply to excite sympathy, practice deception, or escape punishment as beggars and criminals; but to torture oneself and suffer pain for lustful and sexual gratification and pleasure stamps the unfortunate human being as a moral degenerate and sexual pervert.

I am unable to find in the literature of the subject a similar or analogous case to the one detailed in this paper, and this is my only apology for reporting it. I am satisfied that the medical profession at large is blissfully ignorant of the prevalence of cases of masochism, sadism, fetishism, acquired and congenital homosexuality, urnings, and other phenomena or psychopathic manifestations, and it is the duty of every physician to report his clinical experience in this respect.

THE *Indiana Medical Journal* is authority for the following: Medical men are discussing a lecture by Professor Pfluger, of the University of Bonn, on longevity, in which he asserts that the average length of human life is steadily increasing. He maintains that one-third of all the deaths registered in Munich are due to heart disease, brought on by the immoderate use of beer, and that tobacco also claims a large percentage of the victims. Among 40 centenarians who have come under his notice there was only one smoker, while nearly all professed a moderate use of alcohol. What Professor Pfluger most seriously warns people against is the thought and fear of death. The mind must be occupied, he says, in order to secure longevity.

PROFESSOR SURMONT, of Lille, France, has been testing the beer made there in respect to its effect on typhoid germs. He found that the cultures of typhoid bacilli added to the beer were all killed in one-half to sixty-seven hours, the bactericidal effect being most pronounced in proportion to the amount of lactic acid in the beer; the acetic acid has also a lesser influence of the same kind. The beer as it is manufactured is evidently a hygienic drink, but when water is mixed with it, as frequently occurs, the germs in the water may prove a source of infection. Beer weak enough to allow survival of bacteria becomes more bactericidal as it ripens, as the bacilli in it generate more lactic acid, which in turn has a destructive action on them.—*Journal of the American Medical Association.*

THE MEDICAL AGE.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

EXPLOITING THE PATIENT.

While rejoicing in the splendid advances achieved in all branches of medical science, those who may be critically disposed can usually without difficulty discriminate signs and symptoms of degeneration among its professors and exponents which from time to time demand careful remediation. Medical science has with difficulty purged itself of many traditional taints. Quackery in some form or other has always more or less flourished alongside scientific methods, and the temptations to irregularity which beset the conscienceless or unsuccessful members of the profession are many in number and bewildering in kind. All these objectionable and more or less immoral tendencies usually assume some form of exploiting the patient. Only a few weeks ago a hospital scheme was foisted on the profession, whereby physicians who sent patients for operation were to be financially rewarded in the final pay-up. Now also from Chicago, a city which seems as fertile in evil suggestion as it is resourceful in beneficent enterprise, comes another scheme, having for its ultimate purpose the exploitation of the patient. A manufacturer of pharmaceutical specialties calls on a physician and offers to put in near-by drug stores any number of tablets the formulæ of which shall be furnished by the physician. These are to be sold the patient at a price which will give physician and manufacturer, and we presume distributer, shares in the profit. One leading physician has been known to say that he could scarcely resist this tempting bait, as it would add at least $1200 a year to his income. Going on the principle that the easiest way to overcome temptation is to yield to it, he felt his conduct would be physically perfect in tendency if he yielded in the line of least resistance.

It is of course unnecessary to point out the obvious immorality of such a proceeding as this. It is a deception of the patient, who thinks that after paying his doctor his fee he is entitled to his medicine without further tribute. It is a fraud on the part of the physician, who is paid his fee for his services, and with that should be satisfied, or if not should charge more. Then again it warps and cramps the physician's liberty of action in the essential matter of prescribing. He cannot avail himself of that exactness and nicety in the adjustment of remedies to disease if he is limited to prescribing in set formulæ. He will be found out, and ultimately will lose the confidence of his patients, as he will his own sense of self-respect. It is unnecessary to assert all this; principles of right-living and right-acting are fundamental, and do not need any more explicit interpretation than that which is supplied by the individual conscience.

Similar to the scheme above mentioned may be noted the case of the doctor interested financially in some pharmaceutical firm manufacturing what are practically proprietary articles. A little boracic acid and soda is given some queer name, and dispensed at 100 times its market value to the unsuspecting victim of conjunctivitis; or an alkaline wash, worth two cents a quart, is sold for a dollar a pint, as Alca-something-or-other, and the victim of sore throat runs all over town trying to procure what any *bona-fide* druggist could give him on the spot. This is all wrong and must ultimately work discredit on those who pursue such methods.

It is earnestly to be hoped that our own self-respect will be the ultimate means of antagonizing these deplorable tendencies; and in fact this is the only source from which relief can actually come.

EDITORIAL NOTES.

Dangers of Coal Mining.

E. W. Parker, of the U. S. Geological Survey, in his report on the output of coal for the year 1901, has presented some very interesting statistics in regard to accidents, fatal and otherwise, which occurred while the miners were at work. His report covers eighteen States; 1467 lives were lost and 3643 men were injured. The number of tons of coal mined for each life lost varied from 426,094 in Maryland to 49,424 in the Indian Territory. The average number of tons mined for each of 1467 lives lost in these

eighteen States was 188,668. In Pennsylvania the number of tons of bituminous coal mined per life lost was a little more than double the amount mined per life lost in the anthracite mines of the same State. Maryland had the largest tonnage per life lost, while Indian Territory had the largest percentage of deaths for the tonnage mined. These figures tend to show that the miners have other troubles besides long hours and poor pay.

The Pope's Last Sickness.

The world has seen a splendid example of the fight old age will sometimes wage against disease in Pope Leo. The case was one presenting some unusual features. Pleurisy with effusion is not a common complication of senile pneumonia. The mildness of the constitutional symptoms was remarkable, the pope practically having a normal temperature and very slightly accelerated pulse till the time of his actual death. One of the many lessons of his life is to show the value of mental occupation combined with a serene disposition, and simple and temperate bodily habits. Leo was a unique and picturesque figure, and the world is poorer by his loss.

Lectures on Sanitation for Architects.

A very important advance in the line of sanitation has been inaugurated by the Prussian government. Architects in the service of the government are now required to attend a ten weeks' course of lectures on sanitary dwelling-houses. The lectures are delivered by the official chief of the architect service and by a physician. They are delivered in the institutes of technology at Berlin and Hanover. This idea is one worthy of emulation in this country, especially in the smaller cities and towns.

Experiment with Plague Germs Forbidden.

Owing to the fact that Dr. Milan Sachs, an Austrian physician, lost his life while experimenting with the germs of cholera in Dr. Koch's bacteriological laboratory, the Prussian government has issued a decree forbidding the further use of plague germs in experiments in that country, the risk of infection being of more importance to the public than the knowledge gained by experi-

menting with these deadly microbes. This decree would appear to be a very harsh one, for with proper precautions enough investigators are always to be found willing to take chances, even with such deadly germs as those of cholera, for the sake of advancing our knowledge in regard to this disease.

Blindness Caused by Paraffin Injections.

That the subcutaneous introduction of paraffin into the tissues, after the method brought out by Gersuny, is not devoid of serious consequences has been shown by a report recently made by Dr. L. Hurd at a recent meeting of the New York Academy of Medicine. The case reported was that of an individual who became blind soon after receiving an injection of paraffin for the relief of a nasal deformity. Two injections had been given with no dire results, but while receiving the third the patient suddenly lost his vision. The cause of blindness was an embolism of the central artery of the retina. The blindness is permanent.

Insurance Against Appendicitis.

A novel form of insurance owing to the popular dread of appendicitis has been brought forward by an insurance company of London. This company—The London Insurance Company—issues policies at the rate of $1.25 per annum for every $500, and also guarantees its policy-holders all the medical, surgical, and nursing expenses up to the amount insured in the event of an attack of this malady. Owing to the wide-spread knowledge of the laity of this disease and the fear in which it is held, this mode of insurance will doubtless prove a profitable one for the company exploiting it.

ITEMS AND NOTES.

On May 31, in the presence of an audience of 20,000, the new sanitarium at Battle Creek was formally dedicated.

London's mortality for 1902 was at the rate of 18.64 per 1000; that of Paris 18.4; of Vienna, 19.4; and of St. Petersburg, 23.

The mayor of Philadelphia has vetoed the ordinance of the council granting the use of certain wards in the Philadelphia Hospital to graduates in homeopathy.

The annual meeting of the Medico-psychological Association of Great Britain and Ireland was held at the rooms of the Medical Society of London, 11 Chandos Street W., on July 16 and 17.

The mortality report of the Hawaiian Board of Health for the last month shows an unusual percentage of deaths from pulmonary tuberculosis. Almost 20 per cent of the deaths were due to that disease.

An attempt is being made to secure funds to erect two sanatoriums in Colorado Springs—one for the poor who cannot afford the expense of treatment, and another for those who are able to pay for their care.

An institute for phototherapy, or healing by light, will shortly be opened in Chicago by Dr. Wellington T. Stewart and Dr. H. J. Stewart, who have been in Copenhagen, Denmark, studying Dr. Finsen's discovery and methods.

The Stevens triennial prize of Columbia University for original research has been awarded to Drs. L. Pierce Clark and Thomas P. Prout, of New York, upon "Status Epilepticus: A Clinical and Pathological Study of Epilepsy."

The Chinese Chamber of Commerce of Manila, which has great influence over the Chinese there, has recently decided to build a retention camp and hospital buildings for the treatment of plague, cholera, and smallpox among the Chinese.

The first general meeting of the Belgian National League against Tuberculosis was held at Brussels on Sunday, June 14. An address on tuberculosis as a social disease was delivered by Professor Calmette, director of the Pasteur Institute, Lille.

At the annual session of the American Congress on Tuberculosis, held recently in New York, the new council provided for by the revised constitution of last year was elected and was instructed to arrange for the Congress of Tuberculosis at St. Louis in 1904.

A board has just been appointed by the Italian Minister of Public Instruction to see that the new law relative to physical training in schools and universities is efficiently carried out. The president of the board is Commendatore Angelo Mosso, Professor of Physiology in the University of Turin.

The Russian National Medical Association which honored the memory of Pirogoff by changing its name to that of the "Pirogoff Association of Russian Physicians" has equipped and sent out two expeditions for the study of malaria, one in the Caucasus and the other in the Woronesh province.

According to a statement of an official of the United States Marine Hospital, more than one hundred cases of "pink-eye" or trachoma have been found among the employees of the Lackawanna Steel and Iron Company in Buffalo, N. Y. It is supposed that the disease was brought here by immigrants coming by way of Canada.

At the annual meeting of the Alabama State Medical Association the following officers were elected: President, M. B. Cameron, of Sumpterville; vice-president, J. R. G. Howell, of Dothan; secretary, Lewis C. Morris, of Birmingham; treasurer, H. G. Perry, of Greensboro. The annual meeting for 1904 will be held in Mobile.

An Austrian professor says that water may be sterilized in five minutes, and made both harmless and palatable, as follows: To one gallon of water add three drops of the following solution: Water 100 parts, bromide 20 parts, potassium bromide 20 parts, and then, after five minutes, add three drops of a nine-per-cent solution of ammonia.

According to a Philadelphia paper a Miss Death, daughter of an undertaker, was lately taken to the German Hospital in that city suffering from appendicitis. She was operated upon by Dr. F. H. Dye, and placed in charge of a day and night nurse, the former being Miss Payne, the latter Miss Grone. In spite of this gruesome combination the patient convalesced rapidly and was soon discharged.

A well known opera prima donna of Munich, Mme. Mikla Ternina, has brought suit for 50,000 marks against her physician. She suffered severely from trigeminal neuralgia, and while under treatment for the same became partially paralyzed in the left side of the face. She was led to believe that the remedies employed for the neuralgia brought on the paralysis.—*Exchange.*

On May 13 the University of Budapest celebrated the one hundred and twenty-third anniversary of its foundation. After a solemn mass the annual meeting was held under the presidency of Professor Ketly, Rector Magnificus. The dean of the Medical Faculty, Professor Thanhoffer, presented a report on the essays offered in competition for prizes, and the prizes were distributed by the Rector Magnificus.

The monthly report of Dr. Carlos J. Finlay, chief sanitary officer for the island of Cuba, says the showing for 1902 and the beginning of 1903 is very satisfactory, not only in regard to the complete exemption from yellow fever and smallpox, but also in the number of deaths from malaria and in the total mortality. There has been no smallpox on the island since July, 1900, nor yellow fever since September, 1901.

The first number of the *Index Medicus,* that for January, has recently been issued, and it is provided that succeeding numbers will be issued rapidly up to the even date. The subscriptions have not yet reached a sum sufficient, when added to the $10,000 per annum appropriated by the Carnegie Institute, to pay for the cost of publication, and an appeal is made to the profession throughout the world to support the enterprise.—*Medical Record.*

There are only four medical students from the United States inscribed in the French medical colleges at present. The number has not been above six since 1896 and 1897, when it was respectively 14 and 10. The more stringent regulations since then have reduced the total number of foreign students from about 1054 to 55. The total number of French students has also diminished from 7779 to 6960.—*Journal of the American Medical Association.*

The establishment of a national hospital for consumptives is being planned. It is to be on the boundary between Arizona and New Mexico. Patients without means will be cared for at the expense of the hospital. Dr. T. C. Bancroft, formerly of Kansas City, is at work on the plans. It is proposed to make the Presi-

dent of the United States honorary president, with a board of directors composed of the governors of all the States.—*New York Medical Journal.*

Senator Piot has written to Premier Combes proposing that the government accord decorations to mothers of families. The senator says the depopulation of France is a serious menace, and urges that mothers of large families are entitled to equal consideration with firemen, gymnasts, and others who have recently been decorated. M. Piot expects to propose in parliament the creation of a mother's decoration consisting of a ribbon and cross.—*American Medicine.*

The appeal for funds to erect a resort for convalescent members of the profession in Germany has already met with a response, as the director of the stock company exploiting the baths at Salzschlirf has donated a beautiful tract of land for the purpose at Ilbeshausen, Hess. Hills, dales, and virgin forests combine to render it an ideal spot. A committee is to be appointed to solicit subscriptions, and the project will probably soon be realized.—*Journal of the American Medical Association.*

The drug stores have all closed in consequence of the enforcement of the Havana Provincial Council's tax on the sale of patent medicines, and free prescriptions are again in vogue at the public dispensaries. The druggists say that, rather than continue to be fined for the privilege of selling patent medicines, they prefer to remain closed until Congress passes on the pending bill providing that the government shall collect internal revenues and appropriate the same among the provinces.—*American Medicine.*

A woman at Spandau, near Berlin, was sentenced to three months imprisonment, says the *Journal of the American Medical Association,* for selling a love potion to women anxious to retain the affection of their husbands. It was found to be a mixture of linseed oil, menthol, and extract of cantharides. The accused appealed the case, and summoned as witnesses the women who had been customers. The latter unanimously testified that there had been no fraud, as the potion had accomplished its purpose. The accused was acquitted.

From London comes a communication that the following has been received from a correspondent in Constantinople: The revolution leaders have at the present moment in their possession a large quantity of the Indian plague bacilli, with a dire deter-

mination to infect Constantinople, Salonica, and even Berlin. "If within eight days after the warning," they say in effect, "the great powers do not grant the execution of the Berlin treaty, then we die, but we shall not die alone, for there shall follow us to the grave myriads of people in Europe—Europe which robbed us of our liberty."

Owing to an imperceptible defect in a rubber glove used during an operation on May 14, and a slight abrasion due to a hangnail on the finger, Dr. Nelson H. Henderson, of Chicago, contracted blood poisoning. The operation was performed for virulent septicemia, on a hospital patient from Whiting, Ind. The patient died within twenty-four hours, and three days later a soreness manifested itself on Dr. Henderson's finger, and on June 24 he died from blood poisoning.—*New York Medical Journal.*

It has recently been asserted by a writer in the *Medical Times* that examinations of the eyes indoors is no test of their actual capacity, and that all examinations of the eyes of schoolchildren should be made in the open air, as otherwise there can be no true standards. He states that the superior visual acuity of Indians and other savages is due to the necessity of concentrating their attention on objects on which their food and safety depend, and proves his assertion by statistics—many new and personal—which demonstrate that the out-of-door eyesight of civilized peoples averages as high as that of the uncivilized. He concludes that any one can make his eyesight equal to that of a savage by concentrating his attention sufficiently. He adds a plea for more out-of-door life for children, even at the expense of their studies.

Professor Dexter, of Illinois University, who has collected a large array of figures, according to *American Medicine*, states that in ten years 210,334 students have been enrolled, and 22,776, or 10.8 per cent, have played football. Of these 654 have been sufficiently injured to cause absence from classes, and three have been killed. Thus far in the last ten years one man out of every 2846 players has been injured. He summarized his data as follows: One student in ten in America plays football. About one in thirty-five players is injured badly enough to cause loss of time in class. The number of college men who are permanently injured is very small. Opinions of college officers as regards the value of the game is 27.3 to 1 in favor of football. Accident insurance statistics indicate that many other sports are more dangerous than football.

Captain J. C. Gilmore, U. S. A., at Savannah, Ga., says that the United States army is threatened with many cases of leprosy as a result of service in the Philippines and Cuba. He wrote recently to the War Department for information as to how he was to pay his first sergeant, who is suffering from leprosy at Tybee, Ga. At present, however, this case of Sergeant Mix is the only case in the army, and he is kept isolated, so that there is no danger of the contagion spreading. The acting surgeon-general does not believe that leprosy is as contagious as smallpox. The War Department has refused to remove this private soldier, now confined at the military station at Tybee, to the Sapelo quarantine station. No fear is entertained that leprosy will spread among the United States soldiers. —*Philadelphia Medical Journal.*

The Vienna "Medical Doktoren-Collegium" now has a membership of 715 physicians, with a capital of about $1,700,000. One of the features is the "widows' and orphans' society," with 404 members. It paid pensions to 187 widows and three groups of orphans, about $50,000 in all, last year. The "support institute" has 238 members, and its fund amounted to $85,000. It supplied permanent support to 6 members and temporary to 10, expending $2000 in this way. The "pension institute" had 238 members and a fund of $280,000. It pays out annually $240 to 36 pensioners, and paid to the heirs of deceased physicians about $1520 during the year. There is also a "health resort fund," to enable members of the collegiums to have the benefit of a course of mineral waters or trip elsewhere. There are also endowments for needy physicians (35), representing $40 to $176 a year, 12 for widows and orphans of physicians and 16 for the sons' physicians, representing $8.50 to $236 a year, and free places in the institutes. The collegiums sent out 80,000 circulars last year to physicians throughout Austria, endeavoring to secure new adherents, but only 80 responded, and as 41 died or resigned the gain was merely 39. A letter from Vienna to the *Münch. med. Woch.* comments that this apathy in regard to such an important organization, with dues 15 per cent less than lay insurance societies, can be attributed only to indolence on the part of the majority of the profession, or else that the majority are in such financial straits that even the modest dues required are beyond their reach—probably both causes coöperate, the writer concludes. Switzerland has two similar medical insurance societies, the combined capital about $38,000. One is three and the other twenty years old.—*Journal of the American Medical Association.*

NEW PUBLICATIONS.

CLINICAL PSYCHIATRY.

Any text-book which conduces to clearer knowledge should find a warm welcome. This is due the book by Dr. Defendorf, which has been written that the teachings of Kraepelin might be more easily accessible to American readers. Dementia precox here finds a place which it has in no other American text-book on mental diseases, and "maniac depressive insanity" is coming to be accepted as a more scientific term under which to gather most of the manias and melancholias than the older and looser method which has obtained hitherto of grouping all psychoses showing states of elation under the term "mania," and all those showing symptoms of depression under the term "melancholia"—a plan especially confusing, since it is well known that these conditions frequently succeed each other in the same case. The classification adopted by Kraepelin finds much favor with alienists, and its more careful study, an opportunity for which this book affords, will at least shake us out of the ruts in which man is too lazily inclined to tread.

The book is well and clearly written and attractively bound and printed. To any one desiring to keep abreast of the later teachings concerning mental diseases, this book is a valuable addition to his library.

Clinical Psychiatry. A Text-book for Students and Physicians. Abstracted and Adapted from the Sixth German Edition of Kraepelin's "Lehrbuch der Psychiatrie." By A. Ross Defendorf, M.D., Lecturer in Psychiatry in the Yale University. Pages 420. New York: The MacMillan Company, 1902.

STUDIES IN THE PSYCHOLOGY OF SEX.

The new volume of studies by Havelock Ellis deals with certain essential problems in sex psychology. The first part of the present volume consists of an analysis of the sexual impulse. It is needless to say that this is very carefully dissected, and the facts are arrayed in orderly and scientific sequence quite in harmony with Mr. Ellis's mode of writing. The second part deals with the sexual impulse in women. The difficulties attendant upon the discussion of this theme have been largely surmounted by the earnest collaboration of female contributors. Sexual histories form the appendices of the volume. The work is exceedingly interesting, and is an earnest and faithful attempt to comprehend a difficult subject.

Studies in the Psychology of Sex. Analysis of the Sexual Impulse, Love and Pain, the Sexual Impulse in Women. By Havelock Ellis. Philadelphia: F. A. Davis Company, 1903.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Some Contributions to the Surgery of the Gastrointestinal Tract.

Prof. John V. Mikulicz-Radecki, at the recent meeting of the American Surgical Association (reported in *Medical Record,* May 30, 1903), read this paper. The essayist said he wished to speak of three procedures which had recently proved of great interest and value to him. The first was of the recognition and treatment of the condition which he had named cardiospasm, the second bore upon gastric ulcer, and the third upon intestinal intussusception. He said that while the condition of cardiospasm had only begun to be recognized, and that therefore but fifteen cases have been recorded, five having occurred in his own practice, nevertheless there is ground to believe that it is a pathological entity of considerable frequency. The symptoms occasioned by the spasm of the muscles at the cardiac end of the stomach or lower esophagus are so vague and indeterminate as to render a diagnosis based upon purely subjective signs impossible. He therefore had devised an esophagoscope, which portrayed very readily the pathognomonic objective signs with precision and clearness. He had formerly operated upon these cases by making an incision into the stomach of sufficient size to introduce the whole hand, in order that he might guide a dilating instrument into the almost closed cardiac end of the stomach and thence into the esophagus, but a further experience with these cases had led him to conclude that a very small gastrotomy was all-sufficient, and indeed he was of the opinion that with the perfecting of his esophagoscope he would be able to do all the work from above. Simple dilatation to the extent of seven centimeters sufficed to afford absolute relief of all symptoms. Both as an aid to diagnosis and to prove that the intervention undertaken has been successful, the *x*-rays are of paramount value.

Bearing on gastric ulcer, the speaker said that there is yet much to know about this much-talked-of condition. He wished to call attention to the ulceration of the bowel in the upper region of the jejunum, with special reference to its etiology. From an observation of numerous cases he had been forced to the conclusion that those patients upon whom anterior gastroenterostomy had been done were essentially the ones in whom we might look

for the possible occurrence of this rare but very fatal form of ulceration. This he explained on the ground that in doing the anterior operation a portion of the jejunum relatively low down is taken. This technique of necessity makes use of a section of the gut which is further removed from the stomach in the case of the posterior operation, and hence the gastric juice, when turned upon its delicate membrane, is apt to cause necrosis and ulceration. He considered this a very important reason for the avoidance of anterior gastroenterostomy. It is a factor in determining him in his preference of Finney's operation of pyloroplasty over the usual method of gastroenterostomy.

Intestinal intussusception might, he said, give rise to the formation of tumors so large as to demand the utmost surgical skill for their successful removal. He cited two cases in which the condition had been so extreme as to necessitate the creation of a new technique directed toward their relief. It consisted in a longitudinal splitting of the intussuscipiens with a ligating of the part to the abdominal wall, and a subsequent removal of the intussusceptum from above, the tumor being so big as to render its delivery through the rectum impossible. His results had been so gratifying that he felt justified in presenting his technique.

The Treatment of Clubfoot.

Prof. Cesare Ghillini (*Lancet*, May 16, 1903) read a paper before the Fourteenth International Congress of Medicine on the treatment of clubfoot. He confined himself to congenital equinovarus, the commonest and the most interesting form. He is inclined to attribute this deformity to the intra-uterine pressure acting on the fetus. Clubfoot is generally due to the soft parts, for the bones are only slightly deformed. Professor Ghillini then reviewed the different operative methods of treatment, and expressed the opinion that clubfoot is always curable whatever the degree of deformity or the age of the patient. He described his own practice. In cases seen shortly after birth manipulation was employed; later forcible manual correction; and when this failed he performed about the end of the first year of life Phelp's operation (tenotomy of the tendo Achillis and division of all the soft parts opposite the mediotarsal articulation). The orthopedic surgeon has two indications: first, to remove the obstacles to correction, and as these are chiefly the soft parts they must be divided; and secondly, to maintain the correction by the application of a plaster-of-Paris splint, and to keep it on sufficiently long. In one case Professor Ghillini had kept a plaster-of-Paris

splint on for seven months. If necessary the splint could have an aperture opposite the wound to allow of the application of dressings. The results had always been satisfactory both as to shape and to function. He is inclined to avoid all operations on the bones, for talipes equino-varus is "an affection of the muscles rather than of the bones."

The Treatment of Cellulitis After Incision.

Stephen Paget (*Clinical Journal,* April 8, 1903) says that with regard to the treatment after incision he thinks it is best to lay gauze lightly in the wounds, and to wrap the limb in gauze for a few hours only, and then to foment it with hot boric lint. It is a mistake to attribute any great value either to drainage-tubes or to plugs of gauze. He has seen drainage-tubes kept in day after day, even after they had made regular tunnels that could be looked through and daylight seen at the other end, and thick, sodden plugs of gauze pushed in at one incision and out at another, and moved and pulled about, giving pain at every dressing, and serving only to keep the pus and the sloughs from finding their way out. He is sure that this excessive use of tubes and plugs is bad surgery; and the same applies to the excessive use of the arm bath. It is very tiring and uncomfortable to keep one's arm in a bath, and he doubts whether a bath for an hour is any better than a bath for a quarter of an hour. Nor is there any evidence that it makes any difference what sort of antiseptic is put in the bath. Probably a dash of iodine or of Condy's fluid is just as good as anything else, and a hot soaking for ten or fifteen minutes is quite long enough. Then the arm should be taken out, wrapped in hot fomentations, and left alone for a time. Like every wounded limb it wants rest, and it cannot get properly rested if it is perpetually being bathed and plugged and moved about.

Tendon Grafting in the Thigh.

Vulpius (*Wiener klin. Rundschau,* No. 15) for the treatment of contracted knee due to the paralysis of the quadriceps in order to gain an extensor has used the method of tendon grafting. The sartorius muscle is most commonly used, or else the biceps or one of the adductors. Usually the tendons are long enough to be fastened to the lower edge of the patella, thus giving the same natural pull as would be the case if they were fastened to the tuberosity of the tibia. The author reports four clinical histories with gratifying results.

MEDICINE.

Albuminuria in Diabetes Mellitus: Its Importance as a Factor in the Causation of Coma.

A. R. Elliott (*Medical Record*, May 16, 1903) draws the following conclusions:

(1) Albuminuria is a frequent occurrence during the progress of diabetes, one-third of all cases manifesting this symptom at some time during their course. (2) Albuminuria in diabetes may, for clinical purposes, be divided into two varieties, toxic and degenerative. (3) Toxic albuminuria is generally of acute onset, arising during the later stages of the severe form of the disease, as the result of irritation of the tubular epithelium, producing hyaline degeneration thereof, and due to the presence of acid toxins in the blood and urine. (4) Toxic albuminuria is an invariable precedent and accompaniment of coma, and may be regarded as one of the greatest prognostic significance. (5) Toxic albuminuria and its associated renal changes are the final determining causes of coma diabeticum, by producing a heaping up of sugar and toxins in the blood, through diminished permeability of the renal secreting structure. (6) Degenerative albuminuria occurs with great frequency during the progress of the mild type of the disease, and is of renal origin and produced by a gradually developing nephritis, which arises from prolonged hyperfunction and impairment of renal nutrition. (7) The appearance of albumin under the circumstances, while of little immediate significance, is of the greatest eventual importance, as indicating the intrusion of chronic nephritis into the already manifold clinical difficulties. (8) A few cases of albuminuria diabetes may be produced by venous stasis due to cardiac asthenia, and under such circumstances will be associated with other evidence of heart failure. (9) Albuminuria in diabetes is never devoid of importance. It may be of the greatest significance, and is always of sufficient import to receive the earnest attention of the clinician.

Paroxysmal Hematuria.

W. G. Thompson (*Medical Record*, June 6, 1903) has reported ten cases of this variety, one of which had been known to have existed for sixteen years, and the others for fourteen years. The attacks were brought on in both cases by slight exposure to cold and fatigue. These attacks would start with a

chill, rise in temperature to 103°, marked urticaria, disturbances of sensation, and numbness. One hour after the onset the patient would pass dark-colored, smoky urine, which became progressively darker at each voiding. On one occasion the second patient developed hydrops articulorum. In neither case was there jaundice. In the second case, a boy, it was found that the exposure of one of his hands to a temperature of 60° would induce an attack. Two hundred and six cases are to be found in the literature.

The important points in the disease are the presence of hereditary syphilis, urticaria, etc. The condition is rare in the United States. It is a disease of the nervous system, and the presence of a neurotic temperament and alcoholism in the parents are important points in the predisposing causes of the disease. Males are more often affected. Few cases are reported after the sixtieth year. It is commonest in the fourth decade. It is never fatal or associated with hemophilia. Temperature not easy to explain, and it might go on to 105°. It is not due to malaria. Pain is constant and radiated in the bladder, and the spleen and liver are enlarged. There is almost always an albuminuria preceding an attack. Many cases are induced by muscular fatigue, especially walking, as is seen in soldiers. Information gained from autopsy is of little value. Hereditary syphilis is the most important etiological factor in the disease. In closing the doctor defined the disease as a vasomotor neurosis, called into play by exposure to cold, fatigue, or mental emotion.

Alcoholic Cirrhosis and Crypt Tuberculosis.

At the meeting of the Paris Hospital Medical Society, held June 1, M. A. Jousset (*Lancet,* May 23, 1903) gave the results of some experiments which he had made with a view of elucidating the rôle played by Koch's bacillus in the production of hypertrophic alcoholic cirrhosis. He had found that the ascitic fluid which accompanies this kind of cirrhosis very frequently contains bacilli, while the same thing apparently exists with regard to the spleen. In two cases inoculation with hepatic parenchyma after the blood-vessels of the glands had been washed out had caused a guinea-pig into which it was injected to become tuberculous, and the same thing happened in another guinea-pig after an injection of spleen pulp. M. Jousset laid great stress on the importance of these researches, which he thought explained in some degree the nature of numerous obscure febrile attacks, and also showed that these bacillemias are curable at least for a time.

M. Mosny said he did not think that the simple presence of Koch's bacillus in the effusions is enough to enable the observer to say that the disease is really tuberculosis. For instance, there are very many cases where some disease such as acute pneumonia or hepatic cirrhosis lights up a tuberculosis which had hitherto been only smoldering. In these cases there is a secondary tuberculization of a diseased condition which was originally of a totally different nature.

M. Besancon agreed with M. Mosny, and referred to cases of cancer, of secondary tuberculosis, and of leukemia complicated with other kinds of infections. He further remarked that it is known to be difficult to differentiate Koch's bacillus from acid-resisting bacilli.

M. Chauffard asked whether these acid-resisting bacilli could not closely resemble tuberculosis bacilli found in the sputum. The question he thought was very important.

A Diagnostic Examination of One Hundred and Fifty Cases of Leprosy.

J. T. McDonald (*Journal of the American Medical Association*, June 6, 1903) says that the microscope is the supreme agent in the final diagnosis of leprosy; no patient should be committed to a segregated colony with a bacteriologic demonstration of the disease.

Of clinical symptoms, maculæ, chiefly leucodermic spots, are found in 89 per cent of all cases.

The lepra nodule, found in 74 per cent, is the one chief distinguishing lesion of skin leprosy.

Thinning or complete loss of eyebrows and lashes is present in 63 per cent.

Atrophic changes in hands and forearms, with retraction and contraction of fingers and enlarged ulnar nerve, in 32 per cent—a leading feature of nerve leprosy.

The plantar ulcer is found in 26 per cent, usually on the ball of the foot.

Absorption of phalanges in 16 per cent, with occasional spontaneous amputation.

Elephantiasis of hands and feet in 16 per cent.

Facial paralysis in 11 per cent.

The entire body should be carefully tested for anesthetic areas.

Several of the above symptoms can be found in some slight degree at least in every leprous subject.

The Clinical Study of Idiocy.

G. B. Pellizzi (*Journal of Mental Pathology,* vol. iii, Nos. 4 and 5) says that in a given case of congenital idiocy which becomes apparent during early infancy, and which does not present any acute manifestations, it is impossible to make a positive diagnosis regarding the true origin of the affection on the basis of clinical facts. The idea introduced by Koenig and Freud, calling for the restriction on clinical principles of the limits of the so-called common idiocy (degenerative, genetic, evolutive, biopathic) is erroneous. Neuropsychopathic heredity is generally found in cases of cerebroplegias. The duration depends on the nature and the gravity of the lesions. The educability of these subjects also stands in relation to these conditions. The dual forms of the idiocies as considered above must be taken broadly. It may be that developmental defects have their primary origin in pathological processes of the various cerebral zones. Besides, the former may manifest themselves in a manner quite similar to that characteristic of pathological idiocies.

Neutralization of Poisons in the Animal Body.

Kleine (*Zeitschrift für Hygiene und Infectionskrank.,* Bd. xxxvi) injected guinea-pigs with the minimum lethal dose of 1.5 milligrammes of strychnine in a leg which had been previously ligated, and removing the ligature after several hours found that the animals all recovered. If quantities slightly larger than the minimum fatal dose were employed the animals died, after the removal of the ligature four hours later. He showed that small quantities of strychnine gained access to the circulation by the increased reflexes. That neutralization of the poison takes place in the ligated limb is not likely; possibly the central nervous system is able to neutralize the strychnine, although the writer considers this improbable.

The Occurrence of Diastolic Murmurs Without Lesions of the Aortic or Pulmonary Valves.

Diastolic murmurs without organic valve lesions are not, according to R. C. Cabot and E. A. Locke (*Johns Hopkins Hospital Bulletin,* May, 1903), uncommon in connection with dilatation of the aorta, localized or diffused.

When the pleura and pericardium are adherent, owing to tuberculosis or other causes, diastolic murmurs are occasionally audible in the precordia. Such murmurs are notably affected by respiration and by position; they are probably due, in most cases, to suction or pulsion exerted by the heart upon portions of lung adherent to the pericardium ("cardiorespiratory murmurs").

In cases of intense anemia, when the red cells are reduced to or below 1,000,000 per cubic millimeter, one occasionally hears diastolic murmurs not to be explained by permanent dilatation of the aortic ring nor as "cardiorespiratory murmurs," and not due to a diastolic accentuation of a venous hum.

The cause of these murmurs is obscure.

The Uniformity of Inflammatory Disease.

Inflammation, according to J. McCrae (*Montreal Medical Journal*, May, 1903), is a definite series of events, occurring in a definite order; the events may require widely different periods of time, and one event may be more prominent than another, but the uniformity of the process can be depended upon.

The ability to classify and recognize any given case of inflammation depends upon a clear knowledge of this sequence of events, which is found described in the introductory part of every text-book, and in default of a better way must be slavishly learned therefrom.

There is scarcely a limit to the weakness of an irritant, or to the length of time through which an irritant may act; however slow the process, the various events in the sequence are present in their definite order, and the process, though called by the indefinite term degeneration, is in kind an inflammation.

The Influence of Wind on Phthisis.

W. Gordon (*British Medical Journal*, May 23, 1903) is of the opinion that west winds as well as southwest winds in Devonshire have a marked influence on phthisis, raising the phthisis death-rate among populations exposed to them, and injuring those who have already developed the disease. This bad influence is probably due to the fact that west and southwest winds are the prevalent strong wet winds of the county. It is reasonable to believe that strong wet winds anywhere may produce similar effects. The bad effects may be possibly explained by the chilling and depress-

ing nature of the winds and by their tendency to excite bronchial catarrh in those exposed to them.

The Life Duration of the Typhoid Bacillus.

K. Levy (*British Medical Journal,* May 30, 1903) describes some experiments on the vitality of the typhoid bacillus derived from the stool. The feces of a typhoid patient were deposited undisinfected in a cemented pan, remained in this for four winter months, and were then placed in a clay soil for fifteen days at winter temperature. From this soil, in amounts proportionately small, typical typhoid bacilli were cultivated on plates kept at low temperature. The bacillus appears thus to retain vitality under ordinary circumstances for a long period. Such results point to the absolute necessity of disinfecting typhoid stools and urine before disposing of them.

The Agglutinins in Typhoid Serum.

Joos (*Centralblatt für Bakteriologie,* No. 10, 1903) reports the interesting fact that the aforethought single agglutinating body in typhoid serum is not single, but consists of two substances: the *a*-agglutinogen is rapidly destroyed at a temperature of 60° C., whereas the *b*-agglutinogen will withstand this temperature for several hours. By injecting both these substances *a* and *b* agglutinin are produced. If living cultures are injected into animals we get similar results, but if these cultures are first heated to 60° C. only *b*-agglutinin is produced. Possibly this phenomenon will explain the variation of the typhoid agglutinations.

Metabolism of Fat in the Tissues.

Hagenmeister (*Virchow's Archiv,* Bd. 172) in his examinations of animals and man concludes that the cell protoplasm possesses the power of fat synthesis. The fat normally contained in the protoplasm disappears during an increased flow of blood or lymph, and this lymph can saturate other cells and allow the fat to be again deposited. In hyperemic or hyperplastic tissues fat is not deposited; only in beginning degenerations does such deposition occur. In tissues cut off from the circulation, even though separated from the body, fat synthesis can take place, providing that the transudation of the lymph is not interfered with.

THERAPEUTICS.

Chloroform in Typhoid Fever.

Dr. Jose Sureda Massenet, at the recent meeting of the International Congress of Medicine (*Lancet*, May 9, 1903), read a paper on the use of chloroform in typhoid fever. Chloroform, according to Massenet, is not any more than any other drug, in the present state of our knowledge, a specific in typhoid fever. It has, however, a marked effect upon the infective process, as shown by its beneficial action upon the various portions of the affected organism. Thus in the case of the nervous system the use of chloroform does away with or at least minimizes the phenomena of ataxia or extreme weakness (adynamia); in the case of the digestive system it prevents diarrhea and atony and disinfects the stools; in the case of the thermogenetic system it reduces both the actual height of the temperature and total duration of the fever; in the case of the cardiovascular system it strengthens the arterial tension, which is so prone to give way; and upon the excretory system it has a favorable action so that the toxic bodies are more easily got rid of. Owing to its primary qualities chloroform exercises a soothing effect and has a favorable action on the course of the disease. In most cases it shortens the duration of the illness, prevents complications and relapses, and by increasing the powers of assimilation reduces to a minimum the period of convalescence. It is given solely as a drug, and by using it in the form of a one-per-cent solution it has been found that in 167 cases of typhoid fever, treated over a period of seven consecutive years, the mortality-rate came out at six per cent. Given in this way the drug is well tolerated, is easy to administer, and is not repugnant to the patient, even when it is taken without intermission for a long space of time. The earlier the drug is taken the more efficient is its action, and prevents more than it overcomes the graver phenomena of the disease.

The Value of Rectal Feeding.

Edsau and Miller (*British Medical Journal*, May 23, 1903) have exhaustively studied two cases nourished exclusively per rectum with determination of absorption, nitrogen-metabolism, and intestinal putrefaction. Two women after severe hematemesis were put upon three nutritive enemata a day, the total amount given in the twenty-four hours being 400 cubic centimeters of milk and six eggs. Enough salt was added to make

the percentage equal to normal salt solution, and three drops of laudanum were added to this mixture, the whole being predigested with pancreatin. A cleansing enema of water was given an hour before the nutrient, which was administered through a long rectal tube, the hips being elevated and so maintained for an hour thereafter. There was no evidence of any irritation to affect the results. The first patient had 48 grammes food nitrogen in six days; the fecal nitrogen was 29, leaving 19 grammes absorbed. The urinary nitrogen was 60 grammes. The second patient gave results practically similar. The patients after eighteen days of rectal feeding lost about 40 pounds each in weight, though the enemata always relieved their hunger; that, however, immediately and probably by suggestion. The figures showed that at most 40 to 50 per cent of nitrogenous food and one-third of the fat is absorbed, but this only when small quantities are given, the percentage rapidly falling if more be attempted. The calories in the first case were equal to 211 as against 2000 needed per diem, and in the second 319 as against about 2200. Study of the urinary sulphate showed a large amount of intestinal bacterial decomposition which makes the actual results still worse, especially as regards fat.

The authors attribute much of the clinical value of rectal enemata to the absorption of water, which may explain the cases in which weight is gained. In other cases a nutritive balance may be attained, but at a level of subnutrition. If, therefore, the utmost limit of success be attained and the patient be kept from losing weight, we are even then not nourishing him properly, and though this may suffice to bridge over a limited period, its value as a preparation for operation and as an attempt to get the patient into better condition is more than doubtful. The authors' conclusion is that rectal feeding in only exceptional cases prevents tissue loss, the best possible result being to keep the patient from losing ground when already in a condition of decided subnutrition.

Treatment of Inoperable Cancer by Formalin.

A. F. Powell (*British Medical Journal*, May 30, 1903) outlines this method as follows:

Absorbent lint soaked in two-per-cent formalin solution (made by adding 19 parts distilled water to 1 of commercial formalin) is laid on the tumor; this is covered with jaconet and cotton-wool and bandaged on. The dressing should be changed every six hours. After the third or fourth dressing the discharges and

fetor cease; the further process is an aseptic one. In three to seven days the tumor loses its elasticity and becomes darkened, friable, and insensitive; the further use of formalin is painless, and separation takes place. Formalin, two-per-cent solution, appears to exert a selective power on morbid tissue; or perhaps it is that the tissue, being more tender by virtue of its younger age and rapid growth, is less resistive to its action than the more mature tissue. It also acts as a powerful stimulant, thus aiding nature to get rid of its unwelcome parasite. The treatment of the healing surface resolves itself into the ordinary method with alternate boric fomentations or alembroth gauze as occasion suggests itself. The author says his method is practically painless to the patient; with it no narcotics are required, and no anesthetics local or general being necessary. The formalin has time to select other foci should such exist. The whole of the malignant mass is permeated and hardened throughout, and after separation only healthy tissue is left. No sepsis occurs, and the fetid smell is entirely destroyed after a few hours' treatment. The malignant mass is completely removed in sixteen to twenty-four days.

Infant Feeding.

The relative value of recognized methods of feeding infants as esteemed by leading pediatric specialists at home and abroad may in the estimation of A. McAlistor (*Journal of the American Medical Association,* June 13, 1903) be summed up in the following order:

Exclusive breast nursing.

Mixed feeding, the infant having the advantage of more or less breast milk daily whenever and so long as this is possible.

Cow's milk modified in the home, water, lime water, or a simple demulcent being employed as a diluent.

Dispensary and commercially pasteurized milk.

Boiled top milk variously diluted to suit the infant's needs.

Whole cow's milk modified by admixture of one of the artificial foods.

Condensed milk and the several cereal and milk foods.

Treatment of Chronic Urethritis.

G. Luys (*Presse Médicale,* April 27, 1903; *New York Medical Journal,* June 13, 1903) regards urethroscopy as a means of diagnosis far superior to any other method at our command, and

believes it should be practiced much more frequently than it is. By its help polyps, vegetations, and papillomatous excrescences of the urethra may be detected. It renders visible also large strictures, which are characterized by a dense infiltration of the mucosa occluding the urethral walls. In such cases the urethroscopic picture shows no central point of illumination, but a gaping cavity. In a normal urethra the openings of Littre's glands are scarcely visible, their color not differing from the surrounding mucosa. But in certain cases of chronic urethritis the mouths of the glands are turgid, red, and surrounded by a characteristic halo; in other cases simple pressure of the urethroscopic tube upon the glands causes a purulent, opaque, or clear fluid to escape from the glands. Again, the lacunæ of Morgagni, which lie in the penile portion of the urethra and offer a most suitable nidus for microbic growth, remain practically inaccessible to all forms of treatment, except by urethroscopic means. These localized lesions are the ones which foster and keep up a chronic urethritis and which are rendered capable of attack by means of the urethral endoscope. The destruction by means of the fine point galvanocautery through the endoscope of the foci which keep up the chronic urethritis is the best and most efficacious means of treating this form of the disease.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

An Anatomical Method of Demonstrating the Accessory Cavities of the Nose.

G. Bruehl (*Archives of Otology*) gives the following method: A fresh or alcoholic skull is macerated one-quarter; the soft parts are dissected off, and it is decalcified in a ten-per-cent nitric acid solution. Decalcification takes longest at the glabella of the frontal bone and zygomatic process, but is complete in two or three weeks. After washing in running water, the skull is hardened in alcohol, then dehydrated, and finally subjected to a mixture of equal parts of absolute alcohol and ether. The specimen is then placed in carbolxylol. On the following day, if the bone has been dehydrated and decalcified, it is cleared. The specimen is removed from the carbolxylol, the excess fluid is allowed to run off, and an opening is cut in the septum of the frontal sinus; its

nasal canal is closed off with cotton. Wood's metal is melted in a spoon with a tapering tip. Care must be taken not to heat it too much; just enough to melt it is the best. It is then poured into the frontal sinus with the specimen held on its side. The sphenoidal and ethmoidal sinuses are then filled. The maxillary antrum is filled from an opening in the canine fossa; the amount of fluid necessary to fill the cavity enables us to determine its cubical contents. In order to improve these specimens for demonstrating purposes after the metal has become hard, windows may be cut into the walls of the accessory cavities. Enlarged blood-vessels appear through the bone. The furrows in the bone for the vessels may be outlined with water color. All the individual features of these cavities are thus capable of being demonstrated. Their position to the cranial cavity, to the mouth, to the nasal cavities, and their relation to one another, are exactly given.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Differential Diagnosis Between Smallpox and Chicken-pox.

In an article entitled "Some Clinical Observations on Chicken-pox" (*Journal of the American Medical Association*, June 27, 1903) Dr. J. F. Schamberg, of Philadelphia, assistant physician to the Municipal Hospital for Infectious Diseases, records the following as points of differential importance:

Initial Symptoms.—The appearance of the smallpox eruption is preceded for two or three days by an illness characterized in its most complete form by chills, fever, headache, backache, vertigo, nausea and vomiting, prostration, and general pains. The more severe the oncoming eruption the more pronounced are these symptoms apt to be. The syndrome is often incomplete, the invasive illness presenting but a few of the above mentioned symptoms. In exceptionally mild cases one may not be able to elicit a history of a prodromal stage. It is extremely uncommon, however, for this to occur, and the existence of premonitory symptoms should always be regarded as a matter of great differential importance.

Except for occasional malaise, a half-day or so before the appearance of the chicken-pox eruption, there is, in the vast majority of cases, no prodromal stage.

Constitutional Symptoms.—The fever and prostration in the eruptive stage are usually more severe in smallpox than in chicken-pox. This is not an invariable guide, however, as severe cases of varicella are accompanied by higher temperature than very mild cases of smallpox.

Distribution of the Eruption.—It is a well known and important fact that the smallpox eruption attacks with predilection the face and distal portions of the extremities. On the trunk, and especially the abdomen, the lesions are nearly always more sparse. In chicken-pox the eruption is usually most profuse on the trunk, particularly the back, and relatively sparse on the wrists, hands, feet, and face. In general it may be stated that smallpox prefers the exposed surfaces, and chicken-pox the covered.

It has been claimed that chicken-pox does not attack the palmar and plantar surfaces. This statement is erroneous, inasmuch as the palms of the hands and soles of the feet are every now and then attacked in pronounced cases. Of course, one never sees such a profusion of lesions in these regions as is observed in smallpox.

Extent of the Eruption.—The number of lesions on the skin should not be regarded as important evidence. As an example of a sparse eruption may be mentioned an unvaccinated child, admitted some months ago into the Municipal Hospital, who had but five lesions on the entire cutaneous surface. On the other hand, a lad with chicken-pox occupying a different ward had about 1400 lesions, and another boy about 3000.

Character of the Lesions.—In smallpox the eruption begins as firm papules, which slowly increase in size and develop into vesicles and pustules. Not all variolous papules are "shotty," but they are more deeply seated and have a more infiltrated base than the chicken-pox lesions. The variolous vesicles are often harder than the papules. They are moderately uniform in size, and are often, although by no means always, umbilicated. The vesicles are multilocular and difficult to rupture with the finger-nail.

Chicken-pox lesions may begin as maculopapules, but within a few hours some become frankly vesicular. The epidermal roof is thin and easily broken, permitting the exit of a clear watery serum. With the collapse of the vesicle the infiltration seems to disappear. The vesicle is usually unilocular; but little diagnostic value, however, should be placed on the comparative degree of evacuation of variolous and varicellous vesicles with a needle.

Chicken-pox lesions vary greatly in size, some being as small as a millet seed and others as large as a finger-nail. They do

not become umbilicated save secondarily by central caving in or desiccation. The early drying with the production of a depressed blackish crust in the center and irregular puckering of the vesicles or pustule on the periphery is highly characteristic of chicken-pox.

It is not rare in an extensive eruption of varicella to find one or several vesicles which resemble variolous vesicles, and on the other hand, in smallpox to occasionally see a few superficial vesicles which resemble those of chicken-pox. Again, in varicella in adults it is not rare to find on the thick skin of the forehead very firm papules, or even nodules.

Manner of Eruption.—The eruption of smallpox comes out without interruption in the course of twenty-four or forty-eight hours. The lesions show, therefore, a quite uniform development. (It should be remarked, however, that the eruption on the face is always a little in advance of the development elsewhere.) The chicken-pox eruption comes out in crops on successive or alternate days, and the lesions may be seen in varying stages of development. The coexistence of recent tense vesicles, older puckered vesicopustules, and dried crusts is highly characteristic of the disease.

Course of the Eruption.—Smallpox lesions undergo a gradual evolution from papule to crust in the course of ten or twelve days (in modified cases five to six days). Chicken-pox lesions last from two to four days and then crust. The crusts of smallpox are dense and compact, while those of chicken-pox are thin and friable. The presence of numerous hard, mahogany-colored crusts embedded in the horny layer of the palms and soles bespeaks smallpox.

Sarcomatosis Cutis.

In an article entitled "Sarcomatosis Cutis," read before the recent annual meeting of the American Dermatological Association, and published in the *Journal of Cutaneous Diseases* (New York) for July, 1903, Dr. G. W. Wende, of Buffalo, gives the following conclusions:

1. Sarcomatosis cutis (Kaposi), which is now designated as sarcoid growths of the skin, is clinically recognized as having its own individual characteristics.

2. It chiefly attacks adults. The initial lesions are small papules deeply seated in the skin. These gradually develop to a certain size, when some break down, suppurate, and end in exuberant granulations.

3. Histologically it consists of a round-cell infiltration primar-

ily existing in the deeper layers of the skin, around the blood-vessels, hair follicles, sebaceous glands, and lymphatic spaces. While this is suggestive of true sarcoma, it may present the inception of granuloma.

The etiology is at present obscure; apparently we have to do with an infectious disease.

4. While there is a strong resemblance microscopically to mycosis fungoides, the clinical appearance is so entirely different that one need not hesitate to exclude that affection from consideration, it being separate and distinct from this. The theory of syphilis is contraindicated by the clinical appearance and therapeutic test. Lymphoderma and blastomycetic dermatitis are excluded by the microscopical findings. Carcinomatosis cutis is also ruled out by the microscope, although the clinical appearances in the two are very similar.

In the discussion Dr. J. A. Fordyce, of New York, said that the exact relationship to each other of the various affections included under the general name of sarcoma of the skin is not clearly defined. There seems to be transitional types between multiple sarcoma, mycosis fungoides, and leukemic skin tumors. Some of these diseases, like mycosis fungoides, are more closely related to the infectious granulomata than to the true connective tissue growths.

Dr. M. B. Hartzell, of Philadelphia, said that the sarcoma known to the surgeon differs very widely from the sarcoma of the dermatologist. The former type is usually rapidly progressive, while that of the dermatologist lasts for years and is comparatively benign. Many of the cases reported by dermatologists as sarcomatosis cutis last six, seven, even ten years, with very slight evidences of malignancy. On the contrary, the sarcomatous neoplasms of the surgeon not infrequently terminate the patient's life in less than a year. There is evidently a wide difference in the essential nature of the two growths.

Dr. T. C. Gilchrist, of Baltimore, said that in connection with this subject of sarcoma of the skin he had seen two or three cases of mycosis fungoides which had been mistaken by surgeons for sarcoma. Malignant overgrowth of moles is considered by many to be of a sarcomatous nature, whereas a number of observers, with whom he agreed, are of the opinion that they are cancinomatous. Of true sarcoma commencing in the skin, he had never seen a case in Baltimore. Pathologists have often described cellular deposits in the skin as being sarcomatous, a diagnosis which dermatologists would not accept, because similar pictures are so often seen in benign affections of the skin.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

The Etiology, Pathology, and Treatment of Puerperal Sepsis.

H. N. Vineberg (*American Medicine*, May 23, 1903) concludes: (1) Severe puerperal sepsis may be caused by a variety of pathogenic germs. The variety of germ found in the uterine discharge in a given case is no criterion of the severity of the case and forms no safe guide as to prognosis or as to the treatment to be adopted. (2) Bacteriological examination of the blood is of little value, either from a prognostic or therapeutic standpoint. (3) The treatment of puerperal sepsis must be based chiefly upon the clinical history and physical signs of each individual case. (4) Wounds of infection in the perineum, vagina, or cervix are to be treated on general surgical principles or irrigation and drainage. (5) Curettage is indicated when there are evidences of placental decidual residue in the uterus independent of the variety of bacteria that may be found in the uterine cavity. (6) In those rare cases in which adherent and sloughing placental tissues cannot be removed, either with the sharp curette or fingers, hysterectomy is indicated providing the patient is not already moribund. (7) Hysterectomy is also indicated in septic endometritis or infection of the placental site, so long as the infection is still limited to the uterus, and when the symptoms steadily grow worse in spite of uterine irrigation, with or without curettage and appropriately hygienic stimulating treatment. (8) In abscess of the uterus the abdomen should be opened, and when feasible the purulent foci are to be drained and the uterus preserved. If the uterus be studded with small abscesses, hysterectomy is indicated. (9) The abdominal is to be preferred to the vaginal route for hysterectomy. (10) If the infection passes from the uterus into one or other tube and sets up a violent grade of inflammation, the abdomen should be opened and the infected tube removed before a general peritonitis develops. (11) When the infection passes through the uterus and sets up a general peritonitis, a patient may occasionally be saved by a timely abdominal section and drainage. (12) In cases of parametric exudates the treatment should be of a conservative nature, and surgical intervention is indicated only when there are evidences of pus formation.

(13) In obscure cases in which the pathologic lesion cannot be determined and the symptoms are steadily growing worse, it may be advisable to open the abdomen to search for a hidden purulent focus, or for a circumscribed slough of the uterus. (14) The procedure proposed by Trendelenburg, and executed by him and others, of ligating the pelvic veins when they become infected and thrombotic, is worthy of further trial.

Ectopic Gestation.

J. H. Stealy (*American Gynecology*, May, 1903) says cases of ectopic gestation are by no means infrequent, and are among the most serious conditions with which we have to cope. Generally they occur in those near the middle of life, and having a previous history of sterility.

The symptoms especially to be carried in mind are: The woman will have missed a period; colicky pains, bloody discharge from the vagina, or an irregular continuation of menstruation, often leading the woman to believe herself not pregnant.

With few exceptions, and these dependent only on the woman's condition or welfare, the indication for immediate operation in these cases is absolute.

In conclusion the writer says no case of "colic" in a woman capable of procreation, more especially in one married, should be allowed to pass by unscrutinized without the thought of ectopic gestation in mind. And to be emphasized a thousandfold is that no such symptom in a pregnant woman should be lightly regarded. Even though in many hundreds of cases as it will be, our care results in nothing but a confirmation of the transitory diagnosis that passes through our minds, yet sometimes to some woman it will mean her life.

On Chorea in Pregnancy.

C. Wall and R. Andrews (*Medical Press*, May 27, 1903) say that chorea at pregnancy is determined by mental worry, overstrain, or shock acting upon a brain of which the controlling power is lowered by pregnancy and the original stability is subnormal, owing to antecedent rheumatism or chorea, or because it has never reached the normal standard of development.

The author gives an analysis of forty cases of chorea in pregnancy occurring in thirty-seven patients. They show that the tendency to spontaneous abortion has been exaggerated. The

proportion of cases in which spontaneous abortion occurs is very little if at all higher than it is in ordinary pregnancy—*i.e.*, 16.6 or 20 per cent, according to different authorities. Attacks of transitory emotional insanity are probably common, and are not of great prognostic significance. In subsequent pregnancies there is not necessarily chorea. Treatment consists of quiet, full feeding, freedom from worry and anxiety, and sleep if necessary assisted by drugs, of which chloral and chloralamide are the best. Light massage is very useful in some cases. Induction of abortion is seldom indicated and cannot be looked upon as a certain or safe method of treatment.

The Conservative Surgery of Lesions of the Appendages.

Prof. Hector Frank, of Amsterdam (*American Gynecology*, May, 1903), is of the opinion that medical treatment suffices in at least one-half of the cases of salpingo-ovaritis. Medical treatment being insufficient or contraindicated, one should never at the outset perform a radical operation of any sort.

The first operative stage should always be posterior colpotomy.

When by means of posterior colpotomy it is discovered to be a matter of tuberculous affection, hysterectomy should be performed as soon as possible.

In cases of hydrosalpinx which do not yield to repeated colpotomy and which necessitate other intervention, and in cases in which one wishes to try to remedy sterility in women, the conservative abdominal operations (resection, salpingotomy, salpingo-ovaro-syndesis) are indicated.

Salpingorrhaphy should be reserved as an accessory operation to a course of laparotomy performed for no matter what other indication.

Ureter Opening into Female Urethra.

Fisher (*Rev. de Gynec. et de Chir.*, March, 1903) made a necropsy on a woman aged thirty-eight who had died from fibrinous peritonitis; there was apparently no history of urinary trouble. The genito-urinary tract was normal on the left side. On the right there were two ureters. The upper ureter rose from a cystic dilatation in the granular substance of the kidney, and ended in the urethra two-thirds inch behind the meatus. The lower right ureter, completely distinct from the upper, arose from the pelvis of the kidney, and after crossing the upper ureter in the pelvic cavity, passed normally into the bladder.

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To the notes below and on the following pages, also in future issues, we respectfully direct your attention.

Very truly yours,
THE BUSINESS MANAGER,
Box 484, Detroit, Michigan.

SUMMER COMPLAINT.—The mucous membrane of the gastroenteric tract rids itself of the inciting material of summer complaint with the assistance of very little internal medication, though this act is not performed without making a demand upon the general storehouse of energy. Add to this the depression caused by toxemic absorption, and the marked exhaustion of an acute attack is readily explained.

Probably there is no better aid to further beneficial medication than Antiphlogistine applied warm and thick over the entire abdomen, the dressing to be immediately covered with absorbent cotton and a suitable compress. Peristaltic spasm is at once reduced, intestinal comfort promoted, and refreshing slumber invited. Acting reflexly, Antiphlogistine restores the muscular tone of the intestinal walls and energizes the entire economy to resist the prostration from summer complaint so common to infant and adult during the humid months.

THE TREATMENT OF ACUTE ILEOCOLITIS IN INFANCY AND CHILDHOOD.—In Dr. L. Emmett Holt's work upon "The Diseases of Infancy and Childhood," the second edition of which has recently been published, the following statement is made regarding the treatment of acute ileocolitis:

"As the pathological process is principally in the colon, and most severe in the lower half of the colon, it can often be much more effectually treated by injections than by drugs given by the mouth. Irrigation of the colon is one of our most valuable means of treatment in these cases. For general purposes a saline solution at 100° to 104° F. should be employed (common salt or borax, one drachm, to water one pint). One or two quarts should be given at one time; it should be injected high into the colon through a long rectal tube, and early in the disease repeated at least twice a day."

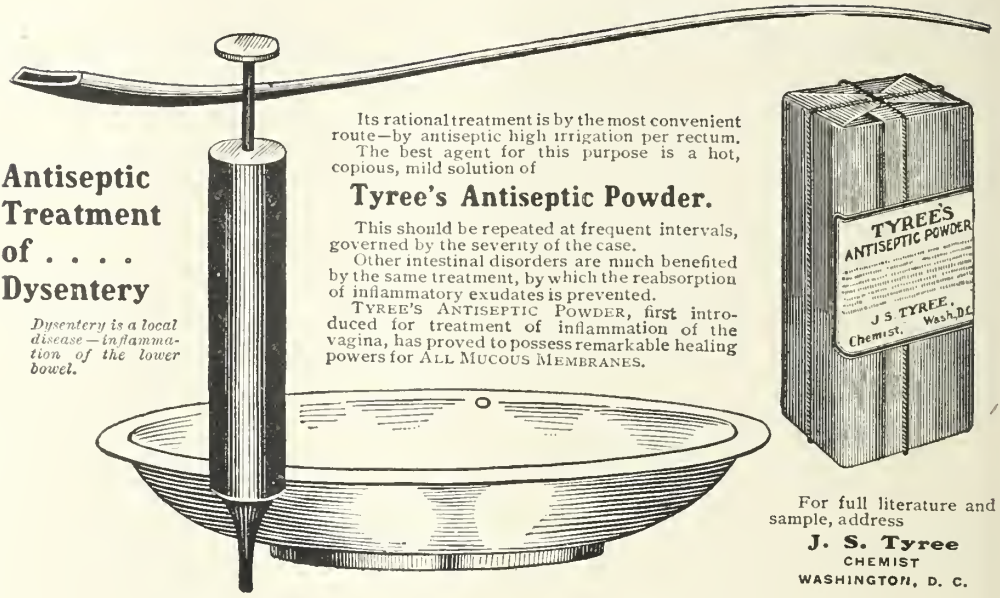
We are in full accord with the statement made by Dr. Holt that "irrigation of the colon is one of our most valuable means of treatment in these cases," but instead of employing a solution of salt or borax we would suggest the use of Glyco-Thymoline one ounce to the pint of water, which has proved very successful in the treatment of intestinal diseases of children. In Glyco-Thymoline we have an alkaline antiseptic solution, such as is indicated in these conditions, where we have to deal with an inflamed mucous membrane, with its acid secretions.

In a communication recently received from Geo. Howard Thompson, M.D., Professor of Materia Medica and Experimental Medicine at the St. Louis College of Physicians and Surgeons, he states: "This summer I have had a large number of cases of cholera infantum, subacute gastrointestinal indigestion, and marasmus. Probably my best results were derived from the following line of treatment:

"The baby was given podophyllin one-fortieth of a grain, or calomel one-tenth of a grain, until the passages became distinctly bilious. Then the following intestinal antiseptic sedative and astringent was prescribed:

Bismuth subcarbonatis, dr. j.
Glyco-Thymoline, fl. oz. ss.
Misturæ cretæ, q. s. ad. fl. oz. iij.

M. Sig.: Shake the bottle and take a teaspoonful every three hours.



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Its rational treatment is by the most convenient route—by antiseptic high irrigation per rectum.

The best agent for this purpose is a hot, copious, mild solution of

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This should be repeated at frequent intervals, governed by the severity of the case.

Other intestinal disorders are much benefited by the same treatment, by which the reabsorption of inflammatory exudates is prevented.

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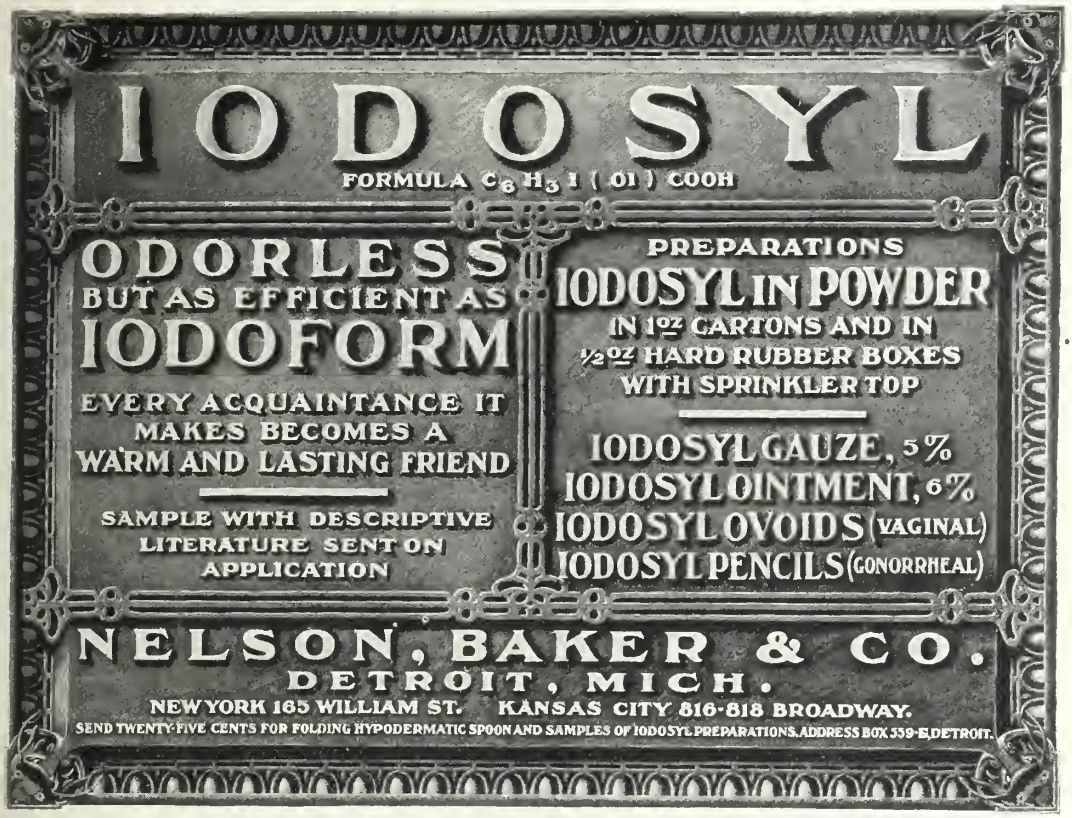
"It is always a good idea to give the baby an enema of a pint of warm water containing an ounce of Glyco-Thymoline at the commencement of the treatment, in order that the colon may be relieved as rapidly as possible of its fermenting and decomposing contents, and that the mucous membrane of the gut may be brought in contact with the antiseptic and healing application. Daily enemata of the above solution are frequently advisable.

"This summer I have had fewer unfortunate terminations in my cases of cholera infantum than in previous years, and I attribute my good fortune largely to the fact that, at the instigation of Dr. A. E. Chatfield, of Cleveland, Ohio, I have added this non-irritating antiseptic, Glyco-Thymoline, to my internal medication in inflammatory diseases of the gastrointestinal tract. It has proven to have these advantages: it is alkaline, it is antiseptic, it is non-toxic, it is non-irritating, it is healing. It is about the only antiseptic that can be safely given to children."

To supplement Dr. Thompson's flattering statement regarding the value of Glyco-Thymoline in the treatment of gastrointestinal disorders in children, we will append the following brief clinical reports:

Fred. P. Lowenstein, M.D., of Westfield, Mass., reports the case of a male child, three years old, who had been suffering from enterocolitis for five days, the attending physician having used without avail all the usual remedies. I was called to see the child in consultation. It was greatly emaciated, with an enlarged and tender abdomen. The temperature was 103.2° F., but in spite of this the body was covered with cold perspiration. The stools were semisolid, resembling chopped spinach in appearance. I advised warm applications of spices to the abdomen and ordered the following:

Calcium carbon. precip., dr. ss.
Tinc. opii camph., dr. j.
Glyco-Thymoline, oz. j.
Aq. Cinnamon, oz. ij.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A teaspoonful of this mixture was taken every four hours, and as a result the child had entirely recovered in three days.

A. D. Ellis, M.D., of Powersville, Mo., reports the following case: The patient, a child of sixteen months, had been suffering from vomiting and diarrhea for six days before I was summoned. The passages were foul and bloody. I immediately put the patient on Glyco-Thymoline and liquor bismuth, equal parts, a teaspoonful to be taken every two hours. Just after the second dose was given I could see a marked change for the better. The patient improved rapidly, and in about three days had entirely recovered. Another similar case, also treated with Glyco-Thymoline, gave me equally good results.

R. G. Waters, M.D., of Milan, Mo., reports the following case: The patient was a child, twenty months old, suffering from gastroenteritis, the vomiting being almost constant. I gave half a teaspoonful of Glyco-Thymoline in hot water every hour until five doses were taken, and also ordered an enema of Glyco-Thymoline, one tablespoonful to four ounces of water. This treatment gave prompt relief, and I believe it saved the child's life.

Aletris Cordial Rio is indicated as a prophylactic remedy against postpartum hemorrhage, uterine weakness, great development of the fetus and of the adnexa, and in those cases in which there is a disposition to hemorrhages.

Severe Reflex Pain.—J. H. Tilden, M.D., of Denver, in the June number of the *Chicago Medical Times,* in an article advocating the use of tampons in gynecological practice, reports among others a case which was characterized by severe reflex symptoms, and which had not yielded to the treatment accorded by two other practitioners. Dr. Tilden's procedure was the introduction of a glycerin tampon and the administration of Antikamnia in ten-

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grain doses (two five-grain tablets) to relieve the pain. The tampon was removed each night at bedtime and followed with hot-water injections. The patient on being discharged remarked that since following this treatment she could run the sewing machine without the usual pain and tired feeling.

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Merz Capsule Co., Detroit, Mich.:

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March 28, 1903.

SANMETTO AS A GENITO-URINARY TONIC AND REMEDY.—I have prescribed Sanmetto in a number of cases of incontinence of urine, with gratifying results. I believe it to be a remedy *par excellence* in all cases of genito-urinary complaints. I have reason to believe that Sanmetto possesses aphrodisiac properties equaled by few remedies at our command.—G. C. SNYDER, M.D., Moxahala, O.

THE MOST ACTIVE AND RELIABLE COMBATANT IN UTERINE DISORDERS.—I have used a number of remedies for the cure of amenorrhea, dysmenorrhea, and kindred ailments to which the female is subject, and have found in Ergoapiol (Smith) the most reliable and active combatant in uterine disorders. After using it in my practice the past two years I find it acts promptly upon the mucous membrane in delayed menstruation, in allaying inflammation, and in dispelling pain. It acts very favorably upon the ovarian tract. A few cases in my own practice are here cited.

Case 1.—Miss T——, aged twenty-two: Never having menstruated, although having full developed organs of puberty for seven years previous; found, upon examination, the uterine organs nor-

SOUND SLEEP

PATIENTS REQUIRE REFRESHING SLUMBER. WITHOUT IT THE NERVES BECOME UNSTRUNG, THE TEMPER IRRITABLE, AND RESULTANT CONSEQUENCES AFFECT EVERY ORGAN OF THE BODY. THE PHYSICIAN KNOWS ITS IMPERATIVE NECESSITY, AND MUST PRODUCE IT NATURALLY OR ARTIFICIALLY. **DANIEL'S CONT. TINCT. PASSIFLORA INCARNATA** BRINGS RESTFUL SLEEP AND LEAVES THE PATIENT IN A CHEERFUL, INVIGORATED FRAME OF MIND, BECAUSE IT IS NATURE'S NERVE FOOD, BEARING VITALITY AND HEALTH TO LANGUISHING NERVE CENTERS.

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SPECIALLY VALUABLE IN
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CYSTITIS—URETHRITIS—PRE-SENILITY.

DOSE:—One Teaspoonful Four Times a Day.

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mal, no imperforate hymen. Had been operated upon for otorrhea two years previous, which resulted in complete deafness. I prescribed Ergoapiol (Smith), two capsules three times a day for ten days, when a scanty menstruation appeared; continued for three months with Ergoapiol (Smith), four days before the menstrual period was due, when normal conditions resulted.

Case 2.—Miss D——, aged twenty-three. Having dysmenorrhea and menorrhagia at frequent intervals, was placed on Ergoapiol (Smith), giving six capsules daily for five days, when pain ceased; with three months' treatment normal menstruations were established, with no hemorrhages appearing between the periods.

Case 3.—Mrs. H——, aged twenty-three. Was left in a very anemic condition following miscarriage, when amenorrhea followed, and was delayed for two periods. I prescribed Ergoapiol (Smith), one capsule three times a day, when normal menstruation returned, and weak system built up with no after-results.

Case 4.—Mrs. B——, aged forty-three. Was referred to me having irregular menstruations two or three times a month. Ovarian pains constantly, profuse and purulent leucorrhea. I had about decided to curette, when the condition of the heart dissuaded me, and resolved to use Ergoapiol (Smith) in large doses, when a profuse hemorrhage for seven days followed, evacuating large blood-clots, relieving the patient to normal condition with no after-effect, and with subsequent treatment was restored to good health.

Case 5.—Miss B——, aged sixteen. Had commenced her menstrual period at the age of twelve years. Was in normal condition for three years, when she was attacked with typhoid fever, having no menstruations for three months. Being in a very anemic condition, heart action was very poor. After prescribing tonics I placed her on Ergoapiol (Smith), in small doses, one capsule three times a day,

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when in two months the regular periods were established without further complications.

Case 6.—Miss T——. Had normal menstruations since fifteen years of age. Became in a very anemic condition through hard work and poor nourishment, etc., and passed her menstrual period for ten days. Prescribed Ergoapiol (Smith) until ten capsules were taken, when menstruation appeared, but with dysmenorrhea. On following the treatment for three successive months the normal conditions were revived, no further trouble ensuing.—Extract from clinical report by E. Alfred Mallette, M.D., Philadelphia, Pa.

Retained Nasal Secretion or Syphilitic Rhinitis?—C. E. Perkins, M.D., of Sandusky, O., illustrates an interesting case of retained nasal secretions, presumably of a syphilitic nature, in which Marchand's H_2O_2 medicinal, cleansed and healed the nasal chambers and a perfect recovery obtained. A brief history of th case is as follows:

After performing an operation, so as t obtain an opening into the posterior nare the parts were washed daily with Mar chand's H_2O_2, one part to four of wate Under this simple and effective treatmen the patient immediately began to improve the fetor disappeared; the stenosis wa relieved; appetite was restored; and ther was a noticeable gain in flesh and strength "The improvement continued," says th writer, "until the normal healthy condi tion was obtained; no ulceration or per foration of the septum remaining, no anything else to suggest that a syphiliti process had been going on."

Surgical Measures of Relief in Stenosis of the Upper Air-passages —Dr. Thomas H. Manley, of New York referring to the necessity in these cases o securing a patent air passage until natur has removed the barriers to norma respiration, says: "To most safely ac

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complish this purpose we must depend chiefly on these three agencies: first, on constitutional treatment; second, on local medicative measures; third, on surgical intervention.".

Concerning the second of these agencies he recommends H_2O_2 medicinal (Marchand's). In many cases of an infectious or gangrenous character extending into the larynx or trachea, he believes that the ideal remedy is one which is gentle and simple in its application, yet energetic in action; one that is tolerated and at the same time possesses the greatest affinity for the necrotic residue of diphtheria, or other morbid elements. To obtain this end there is nothing with which he is familiar that may be administered so successfully as Marchand's H_2O_2 medicinal. "In all cases where we apply H_2O_2," says he, "we should be assured of its purity and standard strength; hence it is my custom to employ Marchand's H_2O_2 only."

In the discussion which followed, several of the members stated their preference for Marchand's preparation, the majority depending upon it entirely as an effective local application. Dr. Stanton stated that he had used bichloride of mercury in the treatment of diphtheria for four or five years, and he regretted to report that his experience was disappointing. So far as local treatment is concerned, he has lately used a spray of H_2O_2 and has never found any reason to regret its use.

In closing the discussion, the writer said that in reference to the question of H_2O_2 increasing the area of membranous exudation, it cannot of course be denied that when the throat was sprayed with this solution a membrane was at once formed, that is, if a deposit of mucus coagulated by H_2O_2 could be called a membrane. Such a membrane was necessarily formed every time H_2O_2 was used, as there would be when a strong solution of nitrate of silver was used, but nothing more.

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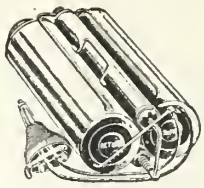

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ORIGINAL CONTRIBUTIONS.

ANTE-REVOLUTIONARY AMERICAN GRADUATES OF THE UNIVERSITY OF EDINBURGH.

BY RUSH MC NAIR, M.D., KALAMAZOO, MICH.

Edinburgh has always, as now, enjoyed the medical primacy of British universities. Hither from the empire upon whose border the sun never sets come the sons of Britain and Ireland's colonials; hither from the ends of the earth, the sons of her traders and her far-flung battle line. And with them come swart faces from the illimitable veldt, where Afric's sunny fountains are a missionary poetic fantasy; and with them too the only less dark-browed Hindu, he of the mydriatic psychic eyes.

Thus to the same shrine in our colonial days young Americans came. They, in fact, were the forefront of the van of that procession of youth which from across seas has wended its way up to the modern Athens.

Not until the first decade of 1700 do the records of the university indicate the nativity of its alumni. But at that time the nationality of the graduate is given, and further:

"Ii, qui ad hunc gradum admissi sunt post institutam Facultatem Medicam, et ab eo Senatui Academico commendati; titulis dissertationum inauguralium adjectis."

The class of 1749 numbered eleven. And here appears the first American name: Joannes Moultrie, ex Carolina Mer. Thesis: De Febre maligna biliosa Americæ.

Class of 1752 numbered nine, of whom was Carolus Moore, Pennsylvaniensis. Thesis: De usu Vesicantium in Febribus.

In 1753 there were thirty-one graduates, two of whom were Americans: Jacobus Jay, Nov. Eboracensis, Dissertatio, De Fluore Albo; Valentinus Peyton, Virginiensis, Dissertatio, De Abortu.

In 1757 graduated Thomas Bulfinch, Nov-Anglic, who wrote on De Crisibus.

In 1758 Thomas Clayton, Virginiensis, De parca et simplici medicina.

In 1761 Gulielmus Shippen, Pennsylvaniensis, De placentæ cum Utero nexu. This class had but six members.

The class of 1762 had two more than the preceding year, and numbered one American, William Smibert, Massachusettensis, De Menstruis retentis.

Of the ten graduates of 1763 there were: Theodoricus Bland, Virginiensis, De Concoctione alimentorum in ventriculo; Joannes Morgan, Pennsylvaniensis, De Pura confectione.

1764. Seven graduates. Arthur Lee, Virginiensis, De Cortice Peruviano.

1765. Thirteen graduates. Samuel Bard, Americanus, De viribus Opii; Corbin Griffin, Virginiensis, De viribus Camphoræ; Thomas Ruston, Pennsylvaniensis, De Febribus biliosis putridis; Jacobus Tapscott, Americanus, De Chlorosi; Samuel Martin, Americanus, De Balneo.

1767. Twelve graduates. Adamus Kuhn, Pennsylvan., De Lavatione frigida; Geo. Steptoe, Virgin., De Febre nervosa.

1768. Fifteen graduates. Benj. Rush, Pennsylvaniensis, Decoctione Ciborum in Ventriculo; Gust. R. Brown, Maryland, De ortu animalium Caloris; Isaac Chanler, Americ., De Hysteria.

1769. Seventeen graduates. Joseph Godwin, Virgin., De Epilepsia; Pet. Fayssonx, ex Carolin. Meridional, De Tetano; Tho. Caw, ex Carolin. Meridional, De Hæmoptœ; Gault, Jones, Virgin., De Dysenteria.

1770. Twenty-two graduates. Gul. Logan, Philadelph., De regimine Phthisicorum; Jac. M'Clurg, Virgin., De Calore; Joan. Ravenscroft, Virgin., De Ictero; Gul. Brown, Americ., De viribus Atmosphæræ; Car. Drayton, Carolin., De Venere; Arch. Campbell, Virgin., De Inflammatione.

1771. Eighteen graduates. Tucker Harris, Carolin., De Cholera spontanea; Gul. M'Ilvaine, Pennsyl., De Anorexia; Isaac Hall, Virgin., De Thermis.

1772. Fifteen graduates. Joan. Parnham, Maryland, De Cystirrhœa.

1773. Sixteen graduates. Ignat. Dan. Knolton, Philadelph., De Pertussi; Geo. Logan, Carolin., De morbis Infantum; Gul. Ball, Virgin., De Tabe mesenterica.

1774. Sixteen graduates. Joan. Griffin, Virginiens., De Potione frigida; Phil Turpin, Virginiens., De Epilepsia.

1775. Twenty-two graduates, only one of whom was an

American: Rob. Peronneau, Carolin., De Menstruorum profluviis.

1776. Eighteen graduates, of whom from the revolting colonies were: Josiah Gibbons, Georgiensis, De quibusdam puerperarum morbis; Sam. Nicoll, Americ., De Arthritide; Ezek. Joan. Dorsey, Americ., De Nutritione; Joan. Carson, Philadelph., De Cantharidum historia, operatione et usu; Dionys. Dorsey, Americ., De Chlorosi.

From 1776 to the declaration of the peace at Versailles in 1783 eleven other young Americans received their medical degree.

Comparatively speaking, the number of our colonial forbears at Edinburgh is surprisingly large. And from what few indications are now extant it appears that these young Americans, like the colonials of to-day, held high standings in the lecture-room and laboratories. Many of them became men of note in the Revolutionary days, in affairs of State, as well as in the world of science, and did their share in the building of our great Republic.

PHTHISIOPHOBIOPHOBIA.

BY A. L. BENEDICT, M.D., BUFFALO.

The fear of being afraid of tuberculosis is being implanted in the medical profession by the eloquent sarcasm of a few of its leading members. Fear is of three kinds—that of the coward, the fool, and the wise man. The physician who shirks his duty through fear of infection illustrates the first kind, but such examples are rare. As an example of the second may be cited the husband of an erysipelas patient, who quaked with fear within an envelope of newspapers which he hoped might protect him from the danger. The fear which is neither cowardly nor foolish avoids unnecessary danger and takes all feasible precautions against it. Even if such precautions are subsequently shown to be inefficient or unnecessary, they are not unwise, for only by experiment can the truth be reached.

The phthisiophobiophobes, who are mainly physicians interested clinically in the treatment of consumption, claim that this disease is not especially communicable, that it is cruel and useless to exclude tuberculous immigrants, to supervise, municipally or otherwise, the sanitary precautions of physicians in charge of private cases of tuberculosis, to segregate tuberculous patients in hospitals, unless their coughing disturbs other patients, or to educate the public to the belief that the consumptive is a danger to his associates. The proposition to attempt the general isola-

tion of tuberculous patients is scouted as visionary and unavailing. We are even informed that the tubercle bacillus is a useful scavenger of the race. The protests of those of us who admit being phthisiophobiophobes are met by the challenge to produce cases caused by contagion, and when such cases are reported we are asked to prove that they did not contract the disease in some other way. With all due regard for the fallacy of arguing *post hoc, propter hoc*, the phthisiophobiophobes remind me of the Australian tribes who disagree with the rest of the world as to the cause of pregnancy, and attribute it to the entrance of a spirit.

There are some questions that the phthisiophobiophobes ought to answer categorically, if we are to be persuaded.

1. What are the little things that we stain red or blue, that are found in tubercular discharges of various kinds, that are not found elsewhere, with the possible exceptions to be mentioned later, and that seem to cause tuberculosis in animals, under favorable circumstances?

2. Granting that the so-called tubercle bacilli are not what we have considered them, the argument must stop here till we have demonstrated some other germ that will be accepted. We understand, however, that few of the phthisiophobiophobes take this extreme position; they must then answer one of two other questions:

(*A*) Is there an absolute division of the human race into immunes and those predestined to tuberculosis?

(*B*) Are tubercle bacilli produced—disregarding artificial cultures—outside of the diseased animal body?

These main questions include some very interesting corollaries. Let us take up first those that would follow an affirmative answer to question *A*. First of all, how shall we recognize what we must consider as a genuine and absolute tubercular diathesis? We are all taught the earmarks of the classic tubercular diathesis of the pretty, blond type, and of the bristly, stunted, bulldog type. But many of these stigmata are evidences of actual tubercular disease, or at least of anemia or some other cachexia which obviously predisposes to tuberculosis. But in actual practice we find marked types of these so-called diatheses which never develop tuberculosis, and, on the contrary, persons of splendid physique and good habits who do.

The problem of diathesis is of importance from the standpoint of state medicine. It is a well recognized principle that the citizen may claim protection from danger which threatens the entire community, but that he must run his chances so far as any personal weakness is concerned. Is it a fact that the temporary

conditions, such as respiratory catarrh, trauma of bones and joints, anemia, fatigue, etc., which have been considered predisposing causes of tuberculosis and which certainly may affect any one, have nothing to do with the etiology of this disease? Then there arises the very interesting speculative question, which must occasionally have its conditions fulfilled: What happens to the individual who has the real, inevitable tubercular diathesis, but who lives in some remote place where the bacillus does not exist? Does he exemplify the old conception of non-tubercular phthisis, or does he enjoy good health in spite of the Damoclean sword with which he is constantly threatened? If the latter, why should not we attempt to exclude the bacillary danger, as we have already done to a large degree in regard to typhoid? Is the tendency to tuberculosis hereditary? If so, why does the heredity involve some and skip others? When several members of a family have scarlet fever within a few months, why do we call it contagion or house infection? If really so, why not explain tuberculosis occurring in various members of the household, even at a greater interval, in the same way?

On hypothesis *B*, that the tubercle bacillus is unavoidable because produced outside the body, the entire relaxation of efforts at disinfection and quarantine is proper. But is it true that the tubercle bacillus multiplies in fomites? Is it identical with the hay bacillus, the smegma bacillus, or any other? Are the reports of experiments to the effect that the tubercle bacillus is killed by sunlight, that it dies out in buried carcasses and cadavers, whether embalmed or not, reliable, or are they untrue? Are tubercle bacilli ever found except where there is the history or the reasonable probability of infection of a fomes from the diseased human being or animal? Is there any wild animal to which tuberculosis is indigenous? Is it not, on the contrary, true that the only lower animals affected are cattle, domestic pets, and vermin, and some few captive animals, including the subjects of laboratory experiments? Are avian, piscian, reptilian, and possibly other analogous granulomata, communicable to man or stock as tuberculosis in the narrow sense? If so, are such diseases prevalent aside from infection from human or similar sources? Does the tubercle bacillus pass through any stage of development after leaving the body before it becomes pathogenic? Excepting fomites protected from sunlight and at a fairly even temperature, is it not true that cattle, some few other animals, and human beings are the only sources of tuberculosis? And are not all fomites merely the resting places of bacilli that have escaped from an animal body?

Many more questions might be asked, but I will perpetrate only one more, at the close. It will have been obvious to the reader that most of the interrrogations are rhetoric, bearing their own implied answers. Some, however, are genuine requests for information, and on all points the writer, and doubtless most phthisiophobiophobes, are open to conviction, but we want our opponents to be a little less pragmatic. Perhaps the word "opponents" is badly chosen, for both sides of the discussion are aimed at the ultimate truth. We have in our timorous way always admired the adherents to the opposite faith, from the time they skated safely over thin ice, stumped us to stay in swimming as long as they did, and called us "'fraid cat" because we would not play with our colleagues who had whooping-cough. Personally, I confess that I have seen none of my antagonists go through the ice, or drown from cramps, or immediately develop whooping-cough. I have known one or two physicians and several other persons who apparently "caught" tuberculosis, but I have known more, similarly exposed, who did not. But from the sanitary point of view of the community, what difference does it make whether the consumptive infects those who form his immediate associates, or whether the successive victims are inoculated with bacilli of unknown source?

THE MODERN CARE OF THE INSANE.

BY W. T. PARKER, M.D., WESTBOROUGH, MASS.

In the early part of the 19th century the work for the amelioration of the care of the insane began to attract very general attention among medical philanthropists. The horrible conditions existing in the New England and other States were brought to light, and public sympathy awakened to the needs which everywhere became evident. In one instance in New Jersey an insane individual was found in a poorhouse "confined by hand and leg irons, with a chain extending from each to the floor." The custodian remarked that he was "neither vicious nor violent, and would harm no one." Others were chained in jails and poorhouses. In one place in Massachusetts—a house of correction so-called—were found ten lunatics, two of them about seventy years of age: one man and one woman in the same apartment of an upper story. The woman was lying upon a heap of straw under a broken window. The snow during a severe snowstorm was beating in at the window, covering the straw, as well as the woman's body. The man was in a corner of the room in a

similar situation. The woman had been in the apartment six years, the man twenty-one years. When the matron in charge was spoken to about it, she said, in extenuation of keeping these people in this condition: "They have never frozen!"

The New Jersey commissioners, who went about visiting jails and almshouses seeking information concerning the care of lunatics, reported that "the peace and safety of society indeed demand their confinement, but there should be established some institution for their proper care and treatment, and they should not be shut up with felons and criminals in the county jails, where everything around them confirms their insanity and renders recovery hopeless." The twentieth century has begun, and still we learn of insane patients who day after day drag their heavy chains in New England poorhouses. The excuse is that no money is available to pay for the employment of attendants.

"Who can minister to the mind diseased? If this deathless query was answered before the days of Penel and Tuke, it would have been in the prison, in the damp, foul cells of monastic structures, or by the crack of the whip, the rattle of chains, or the diabolical sneer of inhuman jailers. But the civilization that opened the century agone had no limit to its bounding endeavor. With Excelsior on its banner and Science as it goal, regulated by Christ-like impulses, it chased away the fogs of superstition, heresy, and religious dogmatism, to build upon more stable foundations. That this impulse was slow in accomplishing results cannot be denied. The results we know: how the insane emerged from darkness into light, from demonism to *human beings afflicted with bodily disease,* from the accursed of God to the weak and suffering calling for our deepest pity, and above all for the benefits of science." (Dr. Wise.)

"Every person has a right as a citizen of the state or a member of society to expect and claim its protection through some of its agencies if he should ever pass into a condition of mental alienation." (Dr. H. P. Stearns.)

It has been evident to all enlightened thinkers that if it is for the interest, welfare, and protection of the state to deprive an insane man of his legal rights, and to separate him from his fellows, the state owes it to the man who has thus lost these privileges to take good care of him. For this and similar reasons it has followed that when institutions have been erected the feeling has been strong that they should be *good enough for anybody,* and that any citizen when afflicted with insanity should not hesitate to seek relief within their walls.

The legacy of the nineteenth century to the twentieth century

in behalf of the insane may be briefly described as well built and well organized institutions with all which these words imply. Mechanical restraint, airing courts, and other similar reminiscenses of the old prison epoch in hospital management have been done away with—that is, in our best, progressive, and up-to-date institutions. There are some institutions where these relics of old-fashioned confinement are still in painful evidence.

In considering the general care of the insane it is indeed a promising sign of the times that methods which are obviously humane, merciful, and kind are classed as "advanced," and all which are harsh and cruel are known as "antiquated." Restraint has utterly disappeared from our more advanced hospitals, and the comfort and happiness of patients are more under consideration than uneasiness as to their possible escape. The secret of success in the treatment of the insane is the care of the *individual,* as to hygiene, medicine, food, surroundings, and general discipline, giving large attention to diversion and entertainment, with a liberal supply of kindness and encouragement!

The poor, the helpless, the aged, and the feeble dependent were annually sold in New England to the lowest bidder for their support. The New York Hospital and the Pennsylvania Hospital had wards for the insane in connection with hospital wards. They were fitted up as cells, and were places of confinement largely. The insane elsewhere were confined in jails, huts, and log pens, and frequently, if raving madmen, they were tied up by the thumbs and flogged into insensibility and silence; in the newer states they wandered at will.

To change all this, and give the insane proper shelter, "an abiding place, kind care, and physical comforts, has been a work of the truest humanity." This has preëminently been the work of the nineteenth century in America. Thanks to the labors of large-hearted public men and assiduous philanthropists, it has been prosecuted faithfully and energetically, until to-day not a State is to be found without provision of some sort for her dependent insane. Suitable provision for the insane is acknowledged as a public necessity, and the American medical profession can justly consider with pride the advances which have taken place through their efforts, so that to-day in no land are the insane better cared for than in America. And if in this good cause of a noble charity we seek the help of the public to be liberal in appropriation, we must educate the voters and those interested as to what insanity *is,* and what it *is not,* and what dire results follow delay in necessary commitment of patients. It is surprising to find how deeply the old-time superstitions and

horrors of the madhouse have implanted their awful pictures in the minds of otherwise intelligent people. Some recital of a morbid mind, some picture of an erratic artist, and the evil and false teaching will spread far and wide. A visit to clean, orderly wards, where self-respecting patients are reading, or engaged in games or other indoor diversions, or to the grounds, where some are strolling and others manfully working and gaining self-control and self-respect, will open the eyes of those whose idea of a hospital for the mentally afflicted is but a prison, filled with demons little better than wild beasts. Those awful scenes are hard to find which shocked our ancestors, and jail and almshouse are no longer considered fit places for those who are sick in mind and body. The manacles and instruments of restraint are fast disappearing in the rubbish heap, and the triumph of mercy and justice is adding new laurels to medical philanthropy.

The great task of the physician is often neither appreciated by the patient for whom he is conscientiously doing his best, nor even by the patient's friends, who should be most interested in the attainment of amelioration or cure. One great obstacle in the treatment of the insane is the difficulty in overcoming injurious habits often deeply seated. Patients arrive in hospital with habits and traits which are doubly aggravating in their obstinate and despairing condition of mind. All these inborn and inbred rudenesses and filthinesses must be either removed or so controlled as to prevent distress in those with whom they must associate. The hospital has an additional care and worry in this fact alone, and the task of reformation, morally, mentally, and physically, is discouraging to any one who is not deeply and conscientiously laboring for the real and lasting welfare of these unfortunate patients. This is another proof, if proof were needed, of the character required in medical officers in institutions of this kind.

The well ordered, quiet condition of a hospital ward is in itself a "suggestion" and an educator. It is the quiet, homely influence of our best hospitals which attracts the attention of the patient as soon as he can observe anything, and leads him to a sense of trust and friendliness conducive to the state of mind required for restoration to health. The fear and dread and horror which at first overwhelmed him when informed of his situation are gradually dispelled by witnessing the contented, pleasant, self-respecting patients about him. The cure is not easily induced. Patience, tact, perseverance, all are needed day after day, hour after hour. An instance is mentioned where an oft-repeated kindly suggestion of the attending physician marked the turning point from disease to convalescence.

The scientific care of the patients does not lessen the attention to two great means of cure, hygiene and diversion. Indeed, both these are included in certain scientific methods. Shelter, food, clothing, air, and water, all these are matters of prime importance, but *diversion* is a problem not easily solved, since hospital patients are from all sorts and conditions of men and women. Out-of-door employment ranks high in the means of diversion. The dignity of labor is shown even in the bearing of the insane workman.

> Something accomplished, something done,
> Has earned a night's repose.

"When a man is rightly occupied, his amusement grows out of his work."

The influence of normal, manly religion upon insane patients is a means of establishing quiet and restfulness, allaying excitement. Often the desperate, hardened man whose thoughts have wandered far away from God is brought to a realization of his responsibility. A kind word and a reminder of God's love and pity for the most erring of His children will appeal to a man's heart and mind and be the starting-point of a right direction and good aspirations. To choose between emotional and normal, between morbid excitement and calm and blessed influences, is often a difficult task for those in authority. The influence of Him who went about soothing and healing the wild, ungovernable maniacs is still potent to-day. If chaplains of tact, and good knowledge of human nature, could be found to accept such a position for insane hospitals the work of the physicians might be greatly aided. But the God-fearing, calm, and kindly disposed physician has immense influence. It is the tramp nurse or attendant who is responsible for most of the abuse and cruelty to patients. He is a past-master in the art of abusing patients, without leaving a mark of injury. "If it were always possible it would be best to select nurses invariably from the inexperienced applicants."

It is impossible to expect patients to improve in their ordinary conduct if the example set is not improving; if the attendants are ill-bred, boorish, and vulgar, untruthful and deceitful, the patients are discouraged in following good advice, and in the obedience of rules for their betterment. Hence the absolute need of carefully selected attendants. Suitable attendants are not readily found, and good pay, reasonable recreation, and shorter hours are what are being more persistently insisted upon. The contentment and cheerfulness of attendants have direct influ-

ence for good upon the patients, whereas dissatisfied, ill-fed, overworked attendants are almost certain to vent their ill nature on the patients, whenever the opportunity is offered.

"A corps of well paid, carefully selected and trained attendants is a *conditio sine qua non* in successful psychic treatment of our patients" (Dr. Runge).

Although it is stated that most of our leading hospitals have long since abandoned restraint, there are institutions to-day where patients are strapped down to beds, and the confining bands, though not of steel and iron, are harsh enough to wear deep, painful sores in wrists and ankles.

The abuse of patients, while it is no longer tolerated in reputable hospitals, still goes on in some institutions even in New England, and blows from club and fist, and strap and buckle, are not unknown to-day.

One of the commonest complaints of human beings away from home is their food. It is never like that which mother or wife provided, and never can be. Good, plain, wholesome food is what should be aimed at, and this perplexing problem has been honestly and kindly solved at some of the hospitals. At such institutions, we can honestly affirm, no reasonable complaint can be made. Indeed, many of the patients never lived so well before their commitment, and would not live so well if restored to their liberty. This in view of the dissatisfaction among attendants and patients in so many institutions is a remarkable state of affairs, and reflects the highest credit upon hospital management. Of such vital importance is this matter of a wholesome food supply in the care of the insane, that its honest and kindly administration is in itself a mighty charity! It has been a temptation often yielded to in our hospitals to make a brave showing of a surplus earned by starving the poor patients entrusted to the care of the institutions!

"For just and sufficient reasons," says Dr. Runge, "may we state them axiomatically, that without peripheral stimulation neither normal growth of the psychic portion of the brain nor the restoration of its impaired function can be expected. With all due allowance for the achievements of the past in the direction of humane and rational treatment of the insane, we must honestly admit that the means at our disposal for carrying on this most essential part of our work are as yet utterly inadequate, which is particularly true with regard to the permanent denizens of our institutions. I am not guilty of exaggeration when I say that all our public hospitals for the insane, without a single exception, are not provided with sufficient means to do this

work properly. If the management of any institution dare put its charges on food rations of such infinitesimal proportions as to keep the latter just short of actual starvation, an outcry of horror and indignation would follow upon the disclosure of such scurvy methods." But the undeniable fact that thousands of human minds through this broad land of ours are permitted to starve and die a slow death for lack of proper psychic stimulation is faced without a murmur or a protest.

Redemption from existing conditions may be hoped for only by increased financial expenditures which will give into our hands sufficient means to combat the destruction of the psychic self of the human beings entrusted into our care. I do not decry the importance of supplying the digestive organs with the necessary amount of substantial, life-sustaining food; but the brain, this proudest possession of man, is surely entitled to some consideration.

"It is sad enough to witness the gradual decline of all higher human faculties, in such diseases as do not lend themselves to control by medical skill; how much worse is it in cases in which by the adoption of proper and timely measures the impending catastrophe may be averted! I do not relish the idea of being *particeps criminis* in the wholesale assassination of human intellects without registering an emphatic protest and placing the responsibility for the criminal neglect where it properly belongs." (Dr. Runge's article in vol. viii (1901), Transactions of the Amer. Med. Psycholog. Assoc.)

The confidence placed in patients is seldom taken advantage of. The question as to whom it is best to trust, and how much for his welfare, and the welfare of others, requires very careful consideration. It has been found highly beneficial to allow patients to revisit their homes and families at intervals, either with or without attendance, as the case may be. The joy of heart, the feeling of confidence placed in the honor and good conduct of the patient, are privileges most valued, and the cherished hope is a perpetual stimulus to follow carefully the instructions of the medical adviser. How pleasant home and how dear loved ones seem after the separation! The reunion of hearts which have bled must gladden the angels of heaven! What a privilege to be able to extend to the unfortunate a boon so precious and so uplifting, and to do each and every kindness expecting neither gratitude nor reward, but doing all for the sake of Him who said: "In that ye did it to one of the least of these my disciples, ye did it unto me."

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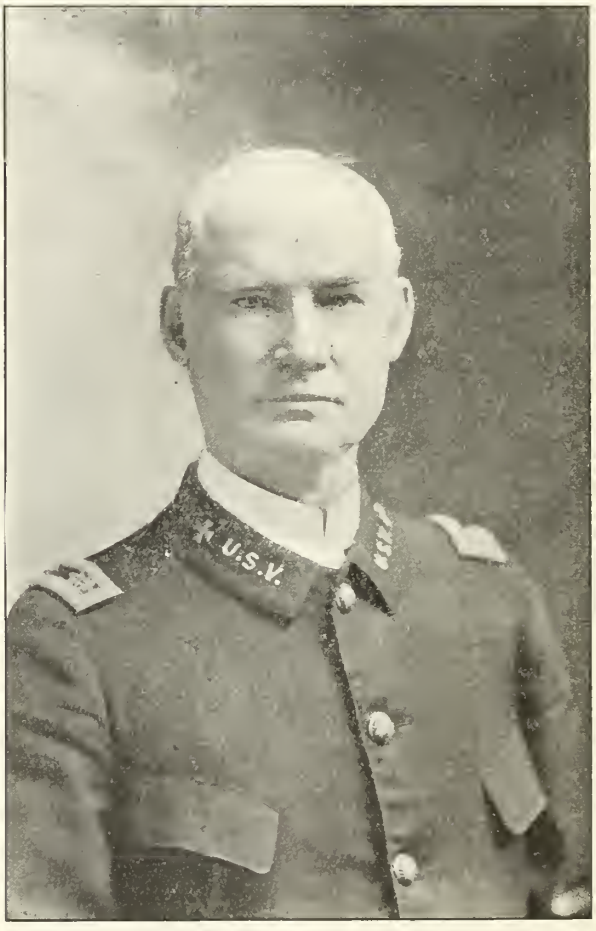
EDITORIAL ARTICLES.

DONALD MACLEAN, M.D., LL.D.

In the death of Dr. Donald Maclean, which occurred in Detroit July 24, the American medical profession loses one of her most brilliant exponents and exemplars of surgical art. The associations which spring to the memory at the mention of his name recall the famous surgeons of another day. He was the pupil of the great Syme and Simpson, and he himself never wearied of recalling the thrilling events which hailed the advent of anesthesia in the University of Edinburgh. The enthusiasm which he imbibed from his great teachers never left him. It manifested itself at every period of his existence, and when he became a teacher of surgery himself, it was found that he had the same marvelous faculty of imparting enthusiasm to others—all his students were surgeons.

Apart from his surgical accomplishments Dr. Maclean was a charming and attractive personality. Generous in the extreme, unselfish to a fault, dauntless in duty, and unwearying in his efforts to promote the happiness and welfare of his patients or professional friends, his popularity was the natural outcome of the general esteem in which he was held. Every young man felt him to be his particular friend. Dr. Maclean held nearly every position of honor his chosen profession could offer him. Shortly after his graduation in Edinburgh he became an army surgeon during the civil war. He was professor of surgery in Queen's University, Kingston, in 1862-64. He resigned this position to become professor of surgery in the University of Michigan, which post he held until 1889, when he resigned by reason of the Regents of the University failing to concur in his views regarding the removal of the clinic to Detroit. He was made

president of the Michigan State Medical Society in 1884, and of the American Medical Association in 1894. He was consulting surgeon to Harper Hospital, Detroit, and chief surgeon of the Michigan Central Railway, and also of the Grand Trunk Railway, until a few years ago, when failing health made abridgment



of his labors necessary. During the Spanish-American war Dr. Maclean was made a staff surgeon with the rank of major.

Dr. Maclean's contributions to medical literature were numerous. He edited the American edition of Syme's Surgery, and our readers will recall his interesting papers appearing in this journal on his "Personal Recollections of Syme."

His death is a calamity, and those who will most deplore his

loss will be those to whom he was endeared by personal bonds and sympathies, of which the outside world knows little. Once to know him well was to feel the subtle fascination his personality exercised through its own expansive and sympathetic genius.

EDITORIAL NOTES.

Diphtheria and Antitoxin.

Just why so many medical men still refuse to use antitoxin in the treatment of diphtheria is hard to conjecture. However, the sad fact is that there still exists a small minority who fail to avail themselves of the use of this most potent of therapeutic agents. It is in this regard that the Bulletin of the Health Department of Chicago for the week ended June 27 says: "With all the favorable showing of general mortality the deaths from the contagious diseases of childhood—notably diphtheria—remain distressingly high. The steadily increasing mortality of diphtheria is nothing short of a reproach to the medical profession. The value of antitoxin both as a curative and as a preventive has been demonstrated as no other medicinal agent ever has. And yet within the week the death is reported of the wife of a physician, and after but a few days' illness, of diphtheria. The doctor himself was stricken and unable to attend her funeral. Antitoxin in full strength and quantity never yet failed to cure a case of diphtheria when administered on the first day of the disease, and but rarely on the second or third day. Just as certainly, when administered within even three days after exposure to a case, it will prevent contracting the deadly disease. In every case of suspicious sore throat give antitoxin at once and in large amount. It can do no possible harm if the disease should prove not to be diphtheria; it will save life in 99 cases out of 100 if it be diphtheria."

Formaldehyde Gas as a Disinfectant.

The use of formaldehyde as a disinfectant has of late years grown in popularity, having been held by the profession as the most efficacious form of disinfectant known. A writer in a recent number of the *Centralblatt für Bakteriologie* takes exception to the generally accepted idea that formaldehyde is of value in the destruction of bacteria. From a series of experiments he found that even under favorable circumstances of temperature and

moisture formaldehyde yields only about 50 per cent of positive results. Disinfection is not equable throughout various parts of a room. Where dust is visible disinfection occurs only exceptionally. Dried sputum on walls or floors is rarely disinfected. Disinfection of the floor almost never takes place owing to the tendency of the gas to rise. The writer claims that in order to make disinfection with the formaldehyde thorough it must be followed by a scrubbing with a strong bichloride solution. Should further experimentation in this regard prove the writer's assertions we will still have to look further for the ideal disinfectant.

Radium as a Therapeutic Agent.

Soon after the discovery of the new element radium experiments began to test the effect of the radium rays in cancer. At a recent meeting of the Vienna Academy of Medicine, Professor Gussenbauer read a paper giving details of a case of cancer of the hard palate which was cured by means of radium rays. The patient, a man past sixty years of age, had been repeatedly operated on, but without success, the disease recurring and rendering necessary further and more extensive operations each time. After the last operation, which occurred last fall, it was decided that nothing further should be undertaken. At this time the individual was exposed to the rays, and a gradual and complete disappearance of the growth took place, which up to the present time has not returned. What the results of this discovery may mean therapeutically is hard to forecast. At present there exists only about a teaspoonful of the element, but should it prove of value in the treatment of cancer no amount of money expended in its production would be lost.

ITEMS AND NOTES.

No more cases of plague are reported either at Tokio or in Yokohama.

The ports of Tampico, Progreso, and Merida are suffering from an epidemic of yellow fever.

The colored public school at Towson, Maryland, has been closed on account of the prevalence of scarlet fever.

Dr. Roswell Park, of Buffalo, has recovered from his recent illness and will shortly be able to resume his professional duties..

A new monthly, called *La Syphilis,* has been founded at Paris. Dr. T. Barthelemy, 22 Rue de Notre Dame de Lorette, is to have editorial charge.

It is reported that Sir Frederick Treves, the leading surgeon of England, who performed the operation upon the king for appendicitis, is about to retire from practice.

It is stated on good authority that Dr. Lorenz, the Viennese orthopedic surgeon, states that he finds the slightest indulgence in alcoholic beverages detrimental to his steadiness of hand.

The young Hindu, Radica, is slowly succumbing to the disease which caused the death of her twin sister, from whom she was separated a year or two ago. She is confined to her bed, and has been admitted to the Cancer Home at Paris as an incurable.

The fiftieth commencement exercises of the medical department of the University of Vermont were held on June 24 and 25 at Burlington, Vt. Thirty-one students were graduated, the same number as in 1902. An alumni association was formed.

When the Jenner Institute of Preventive Medicine was reorganized in 1898 with Lord Iveagh's large endowment no director was appointed. The work of the institute has, however, by this time so much increased that the governing body is soon to fill the appointment at a salary of $5000 a year.

The Austrian authorities announce that the chemical treatment of tobacco by Professor Gerold's method does not free the cigars from nicotine, while the chemicals used are more or less injurious. The tests showed 0.9 to 1.17 per cent nicotine. The Austrian standard cigars contain 1.29 to 3.99 per cent.

The Munich courts have condemned to five months' imprisonment a post-office employee who had established intimate intercourse with a chambermaid of good character ("ein unbescholtenes Zimmermadchen"), although he knew that he was suffering from an uncured venereal disease.—*Exchange.*

Dr. John F. Wilson, of Poughkeepsie, while examining a rifle five years ago, accidentally discharged a bullet which entered his head to the left of the nose. Dr. Wilson latterly felt a soreness of the throat, and with the aid of a mirror discovered the cause in the protruding bullet, which he at once removed with a forceps.—*Exchange.*

The expedition for scientific survey of the Bahama Islands, under the auspices of the Geographical Society of Baltimore, sailed June 1. Dr. Clement A. Penrose is vice-president and surgeon, and chief of the medical staff, with J. A. E. Eyster, H. P. Cole, E. B. Beasley, and T. H. Coffin, of the Johns Hopkins Medical School, as assistants.—*Exchange.*

At the annual meeting of the Mississippi State Medical Association the following officers were elected: President, C. D. Mitchell, Pontotoc; vice-presidents, Joseph Waldauer of Vicksburg, May F. Jones of Columbus, B. L. Culley of Jackson; secretary, J. J. Haralson, Forest; treasurer, Dr. J. F. Hunter, Jackson. The annual meeting for 1904 will be held at Pass Christian.

The Vienna Academy of Sciences has conferred the Lieven prize of about $500 on Dr. J. Schagger, professor of histology at Vienna, for his work on "Cartilage and Allied Structures," and his recent "Studies on Comparative Anatomy." The Beer prize of $250 was awarded to Dr. A. Kreidl, professor of physiology, for his study of comparative physiology of the "statis sense."—*Exchange.*

Dr. Phillip Arthur Reppert, of Chicago, was awarded the Benjamin Rush medal for the highest scholarship during the last four years at the Rush Medical College graduating exercises in Chicago on June 17. He was selected for the honor from a class of 227. In 1901 Dr. Reppert was awarded the Freer medal, it being the first time in the history of the institution that one student has won both medals.

In a report to Surgeon-General O'Reilly, in Washington, from the medical officers in the Philippines, it is shown that the death-rate of Manila for the first quarter of the past four years has decreased steadily from 46.80 per thousand of the popula-

tion for the first quarter of 1900 to 22.17 for the first quarter of 1902. This is attributed to proper medical and surgical treatment and improved sanitation.

The new Cleveland sanatorium for consumptives was opened to the public on June 25. There was no formal dedication. The building is the first of its kind in the United States. About fifty patients were placed there on July 1. Although the sanatorium, which was formerly a smallpox hospital, has been thoroughly disinfected, cleansed, and renovated, there is a prejudice in the minds of many persons against entering its door.

Health Officer Freidrich, of Cleveland, has sent the following communication to every milk peddler in Cleveland: "In order to prevent the spread of contagious diseases, the Board of Health has to insist that every milk dealer use sanitary milk tickets, which are handled by milk buyers only once and are strictly non-circulatory." "Unless they comply with this order at once," says Dr. Freidrich, "we will withdraw their licenses."

Automatic machines called "everybody's doctor" are soon to be installed in the principal streets of Paris. By putting a penny in the slot remedies may be obtained for sick-headache, coryza, lumbago, and toothache. Each machine will contain twelve slots, at the head of which is written the condition for which each remedy is indicated. This system has received a certificate from the Paris Medical Faculty. Naturally the plan is opposed by physicians.—*Exchange.*

The Hawaiian Board of Health asked its superintendent of the leper settlement to investigate the conditions of immorality condemned by the United States commissioners on their visit last fall. He recommends that divorces be secured for those in the settlement who have wives or husbands outside, and that they be allowed to marry persons within the leper colony. A number would marry who are now prevented by marriage ties with those outside.—*Journal of the American Medical Association.*

It is reported in one of the London papers that Mr. W. K. Vanderbilt has offered to his bride the money to carry out her long unfulfilled desire to build a hospital in Paris for free treatment of the poor. The building will be the most complete that can be devised and thoroughly modern in construction. Mrs. Vanderbilt will have *carte blanche* in everything relating to the situation and management of the hospital, which will be called by her name.—*Medical Record.*

Secretary Root decided that nothing further shall be done regarding the proposed opium act of the Philippine Commission until it has had the most careful consideration in Washington. The commission has been so informed by cable, and the opium bill, which has passed its second reading, will remain in its present condition until the Secretary of War reaches a conclusion. Many protests have been received at the department against the proposed law, and the Secretary has been urged to take steps to prohibit its sale.—*American Medicine.*

From *Charities* we quote the following: Five hundred and fifty-three thousand four hundred and one baths are tabulated for the year 1902 in the last quarterly issue of statistics published by the Chicago Municipal Library and Bureau of Statistics. This number was served by the four public baths and two pumping stations. Statistical cleanliness in Chicago was at low ebb in February—30,064 bathers for the month. The increase which sets in with the warm weather more than doubles this total for August—72,618. In addition 208,539 persons bathed in 1902 at the three free beaches.

Inmates of the leper colony, Molokai, Hawaii, who are free from leprosy, are unwilling to leave. Some of these went there to care for relatives who have since died. They are not furnished food, but live on the hospitality of the lepers. Their removal is attended with difficulty, according to reports by the territorial board of health. A reëxamination of all within the colony is ordered by the board to determine who are free from the disease. None, however, wants to leave because of the easy life and the supply of clothing and food at public expense in a delightful climate which they now enjoy.—*Journal of the American Medical Association.*

The German Public Health Society will hold its twenty-eighth annual meeting at Dresden on September 16, 17, 18, and 19. The following questions are proposed for discussion: (1) In what direction do our existing measures for the prevention of tuberculosis require to be supplemented (to be introduced by Prof. Karl Fraenkel, of Halle); (2) the hygienic regulation of hotels and public houses (to be introduced by Dr. Boerntrager, of Dantzig); (3) the sanitary supervision of the milk supply (to be introduced by Professor Dunbar, of Hamburg); (4) the purification of drinking-water by ozone (to be introduced by Dr. Ohlmueller, of Berlin); (5) architecture in relation to public health (to be introduced by Herr Stubben of Cologne and Dr. Rumpelt of Dresden).

VITAL STATISTICS of New York for the first half of the current year have been made public. The condensed report is as follows: For the first six months of 1903, 34,855 deaths were reported, indicating a death-rate of 18.67 per 1000 inhabitants. The decrease of nearly 1 to 1000 marks a saving of 3733 lives. The births reported numbered 46,408, against 40,392 for the first half of 1902. This marked increase was due in part to the increase of population, but more probably to the more careful reporting of the births which has been required of physicians and midwives. The number of births of the year will probably be between 97,000 and 100,000.—*American Medicine.*

FOR some time the sale of oysters taken from the Malabon River has been prohibited in Manila, but the law has, according to the *Boston Medical and Surgical Journal*, been almost a dead letter. An American resident lately sent numerous samples of these oysters to the Board of Health for examination, with a view of having the prohibition of sale removed. The examination was made in the Government laboratories, and as a result the bacilli of cholera and typhoid fever were found to be present in some of the specimens. The prohibition of the sale of the Malabon oysters has therefore not been withdrawn, and more vigorous efforts will be made to secure its enforcement.

THE sickness reported at the naval stations due to the overcrowding of the enlisted force on account of insufficient accommodations of the receiving ships, was predicted by Surgeon-General Rixey several months ago. While Congress was in session he recommended to the Secretary of the Navy that the receiving-ship system be abolished, and that land barracks be erected at various naval stations for the preliminary training of recruits, and he expressed the opinion that epidemics were brought by the crowding and other conditions existing on board the receiving ships. Congress, however, failed to make the appropriation asked for, but better things are expected from the new Congress.

A *Journal of Infectious Diseases* is to be issued in the fall under the editorship of Prof. Ludvig Hektoen and Prof. Edward O. Jordan, of the University of Chicago. The expenses, which it is estimated will amount to $5000 annually, will be met by Mr. and Mrs. Harold McCormick. This agreement is made for an indefinite term, and amounts to a $125,000 endowment. Since the death of their son (Jack Rockefeller McCormick) a few years ago Mr. and Mrs. McCormick have founded the institute for

the study of infectious diseases, connected with Rush Medical College. The *Journal* will give to the scientific world the results of work done there and in other laboratories.—*New York Medical Journal.*

The following committee of organization for the United States for the Eleventh International Congress of Hygiene and Demography, to be held in Brussels, September 2 to 8, 1903, has been appointed at the request of the Belgian government by the State Department: Drs. E. A. de Schweinitz and A. B. Richardson, of the Columbian University, Washington, D. C.; Dr. John Marshall, of the University of Pennsylvania, Philadelphia; and Dr. Harrington, professor of hygiene, Harvard University, Boston, Mass. The committee desires to secure the coöperation of all those in this country who are engaged in hygienic work, both in attendance at the meeting in Brussels and in sending papers to the congress.

From Honolulu comes the news that as a result of the report of the United States Senate Committee that visited there last fall and local agitation, the Board of Health is trying to arrange about sixty divorces at the leper settlement of Molokai, and the assistance of the attorney-general has been invoked. In all the cases under consideration the husband or wife is at the settlement, while the other person is away. These partitions, according to *American Medicine*, have resulted in conditions at the settlement that the Senate committee strongly condemned, and it is the opinion of many that the moral situation would be greatly improved if the lepers were free to intermarry at Molokai. The plan has aroused much local opposition, chiefly of a religious nature.

The American Mothers' Association of the United States has organized what it calls a "birth insurance society" for the benefit of its members who justify their title to membership by becoming mothers. The monthly dues are $3, and the payments made to the policy-holders giving birth to a living child are from $200 to $500, according to the length of time during which the monthly premiums have been paid. The benefits are restricted to associate and junior associate members of the Mothers' Association, and the only restriction is that "no person shall receive any benefit for a birth which occurs within nine months from the date of the first regular assessment," which is probably of the nature of the suicide clause in the older life policies, and intended to discourage attempts to beat the game.—*Medical Record.*

The *Münch. med. Woch.* states that the official organ of the German charlatans has organized a collective inquiry to gather information in regard to blunders and barbarity on the part of the qualified physicians. It appeals to have all instances of the kind known to have occurred within the last two or three years communicated to it, the editor assuming all responsibility and guaranteeing the writers against all unpleasantness. The appeal announces that "not a small proportion but the majority of physicians commit blunders." The charlatans have also banded together and proclaimed a boycott against five of the Berlin dailies which have not upheld them, the boycott to go into effect next October unless the papers change their tone meanwhile in this respect.—*Journal of the American Medical Association.*

The National Association of Retail Druggists has begun a movement looking to the repeal of the patent laws on drugs. An official of the association gives the following reasons for the attitude of the druggists: Few people know that at present the patent laws of our country make it possible to levy a blood tax on many articles made in Germany and used by the sick, the very persons the government would naturally be expected to shield from imposition. Our laws should be so changed that no patent shall be granted on articles used for food or for medicines. It is beyond all reason that the inventive genius of Americans and the conspicuous ability of our chemists should be kept down by these laws, especially when the greatest sufferers from the injustice are those least able to bear the burden.—*American Medicine.*

Dr. Wiley, chief of the Bureau of Chemistry of the Department of Agriculture, will soon commence the study of the effects of tobacco upon the system. He will proceed, says the *American Medical Journal,* as he has done in the case of the foods—that is, he will take pure tobacco in various forms, smoking and chewing, and see what effect its use has upon the consumer when taken in varying quantities. He will then take up the adulterated tobacco, or the flavored tobacco, and ascertain by experiments what effect it has upon the system. It is the intention to take men who are regular smokers and learn their physical condition as to their heart action, respiration, digestion, etc., while continuing the use of tobacco under normal conditions, and then to have these men suddenly cease the use of tobacco entirely. After the effects of the prolonged use of tobacco have been eradicated from the system, it is proposed that the subjects shall recommence the use of the weed.

Recent English statistics show a great increase in the number of cases of suicide in the past twenty or thirty years in all but a few countries of Europe. The proportion in France during the past twenty-five years increased from 157 to 224 per million of population. In Germany it was about the same, and Belgium showed only a somewhat less proportion. In Russia there was no increase. Austria increased by 39 per million, Hungary by 27, Australia by 24, Ireland by 8, Scotland by 18, England by 15, in the same period. In England there has been a steady increase for fifty years. In 1860 the number of suicides was 1357. In 1896 it had reached 2639, of whom 1971 were men and 668 women. In eleven countries suicides have been more common among men than women. The proportion of women to men is greatest in America and Spain. England comes next with 26 women out of every 100 suicides. In the ten years between 1887 and 1897 there were in England over 400 suicides of persons under fifteen years of age; of these 76 were girls.

Governor Yates, of Illinois, has vetoed a bill recently passed by the legislature of that State aiming to give a special status to osteopaths. The bill provided for an examination in osteopathy of all candidates who might have been in attendance for a specified time in an osteopath college. The act also provided for an examiner who shall be a graduate of a recognized college of osteopathy and who should examine applicants upon the theory and practice of osteopathy. The governor objected to these additions as being unnecessary, the present law providing for "examination of those who desire to practice any other system of treating human ailments who do not use medicines, internally or externally, and who do not practice operative surgery." Under this provision the State Board of Health has examined and licensed over 350 osteopaths—not as osteopaths, however, but as licentiates empowered to practice osteopathy or any other system of treating human ailments, without the use of medicine or surgery, they see fit. The specially objectionable feature of the bill, however, was that it compelled the State Board of Health to grant a license to practice to every osteopathist who should have been a graduate of a regular college of osteopathy and who should have been practicing in the State on the first of March, 1903, who should be recommended to said Board by the Executive Committee of the Illinois State Osteopathic Association.—*Medical Record.*

NEW PUBLICATIONS.

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These clinics continue to be as formerly the same excellent means of familiarizing their readers with recent medical progress in all departments. International Clinics stand alone in outliving other periodicals of the same character. The hearty support given by the profession to the enterprise for so many years is an eloquent testimony to their true worth. The present volume contains the usual quantity of excellent material.

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GYNECOLOGY.

The author of this book appears to have written a practical text-book on the diseases of women, describing these ailments and their methods of treatment fully and completely. The first part of the work consists of a description of female diseases, and the second of the operative procedures demanded in their treatment. The work is admirably illustrated by a large number of artistic drawings, and the letter-press has been done in a style representative of the publishers. The book is well written, and will find favor as a text-book during the forthcoming student season.

Gynecology. A Text-book for Students and Practitioners. By William R. Pryor, M.D., Professor of Gynecology in the New York Polyclinic Medical School. New York and London: D. Appleton & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Relation of Diseases of the Internal Female Genitals to the Appendix.

Byron Robinson (*American Journal of Surgery and Gynecology*, July, 1903) says that the appendix seldom infects the genitals.

The genitals frequently infect the appendix, viz.: (*a*) Seldom directly; (*b*) frequently indirectly, by surrounding it with peritoneal adhesions, and this compromises its functions and structure. While the appendix lies in the peritoneal adhesions, it becomes fixed. The appendix is flexed or twisted by the periappendicular peritoneal adhesions, exacerbations arising from the monthly congestions. The appendicular fecal drainage and circulation (blood and lymph) are compromised. Endoappendicitis arises, and the infection passes through the appendicular wall, either along the lymph channels, or by contiguity of structure, increasing the periappendicular peritoneal adhesions and further damaging the appendix.

When a woman is attacked by an inflammatory process in the right side of the pelvis, it may be impossible to diagnose appendicitis or salpingitis, for the appendix occupies the female pelvis in 48 per cent of the subjects.

In the present 515 careful records of personal autopsic abdominal inspections the male appendix showed about 60 per cent of periappendicular peritoneal adhesions. The female appendix showed about 48 per cent of periappendicular peritoneal adhesions. Hence in abdominal operations it will be the rule to find periappendicular peritoneal adhesions.

The increasing utility of the vaginal route in the treatment of pelvic disease is not diminished on account of the obscurity of the diagnosis, for one can decide and act per vaginam.

Since the appendix is the weakest segment of the tractus intestinalis, and causes the most treacherous and dangerous abdominal diseases, its relations to the female tractus genitalis, which itself produces 80 per cent of abdominal disease in adults, will always be of profound interest to the gynecologist.

The chief relation of the ovary to the appendix is modified by peritoneal adhesions, which compromise the anatomy and

physiology of the appendix by trauma, traction, compression, torsion, occlusion of blood and lymph vessels, devitalizing the organ. The appendix being the weakest segment of the tractus intestinalis, quickly becomes a prey to bacterial disease.

The Etiology of New Growths.

T. W. Montaviatt (*British Medical Journal*, June 27, 1903) says that cell activity and cell type must always be the resultant of biochemical reaction, of the principles of which the researches of Ehrlich and others have enabled us to obtain some information.

Cell proliferation as a form of cellular activity is always the resultant of such reaction. When it takes place as the result of increased availability of normal food material, the new cells produced conform to the type of the parent cells. When it follows the action of assimilable materials of abnormal constitution the new cells do not conform to the type of the parent cells.

Cell proliferation of the latter type takes place in certain microparasitic infections.

The new cell types thus evoked exhibit various degrees of instability.

In the granulomata (infectionsgeschwulste) their stability is considerable; in certain growths which result from infective agents (for example, condyloma) the equilibrium of the new type appears to be stable.

In the so-called true tumors, cell types arise as variants on the normal cells of the organ or tissue of origin. The way in which such cell variants may be evoked is not discussed, but that they may result in some cases from the action of microparasites is a reasonable view.

These cell types are stable; their stability is due to the capacity of the particular variant to attach to itself and assimilate material in conformity with its type.

In the simple tumors they are only locally stable, and are not immune to reactionary influences outside the tissue of origin and the normal relationship of parenchyma and connective tissue.

In the malignant growths they possess a wide range of stability and immunity, and the degree of this is the measure of their capacity to form metastases, while local infiltration, the other histological characteristic, is dependent on the principle of chemotaxis, the cells extending in those directions in which their variant and aberrant biochemical affinities enable them to annex material conformable to the building up of their characteristic type.

Septic Endocarditis Complicated with Gonorrhea.

At a recent meeting of the Berlin Society für Innere Medizin, H. Haler (*Medical Press,* July 1, 1903) reported a case of septic endocarditis complicated with gonorrhea.

When we come across a case of endocarditis along with gonorrhea we are at once inclined to assume it to be a case of gonorrheal endocarditis, mixed infection being relegated to the background. This case showed, however, that such did occur. A man, aged forty-seven, had had gonorrhea in his youth which was followed by a stricture of the urethra. In August last he sought advice for a gonorrhea, and in the discharges both gonococci and staphylococci were found. At the end of the month there were both urethrocystitis and prostatitis. A sound was not passed, as it was feared that the gonococci might in consequence find entrance into the blood. Salicylic acid was given. On August 28 a purpura exanthema appeared, in which there were small efflorescences in patches around the dilated vessels, which were joined together by hemorrhage. On the 28th he appeared quite bright, but on the 31st collapsed, and the speaker found all the signs of a left hemiplegia; the lower part of the face was also paralyzed, and there was complete unconsciousness. Endocarditis had therefore developed, giving rise to embolism and secondary hemorrhage into the vein. Death took place in a few days.

An autopsy could not be obtained, but a portion of the skin efflorescences was taken for examination. They were especially found at the extremities and under the nails. The efflorescences were seen to be caused by capillary embolism. These lay in aggregations, were not intracellular, were stainable by Gram's method, and did not contain gonococci; a hemic dermatitis had developed along with a gonorrhea. The invasion by the staphylococci had been rendered possible by the softening of the mucous membrane by the gonococci. The author only related the case to show that not all cases of endocarditis in gonorrheal diseases are themselves gonorrheal.

Gonorrhea Insontium, Especially in its Relation to Marriage.

Prince A. Morrow (*New York Medical Journal,* July 4, 1903) in discussing this subject says that the laity needs: (1) An entire reconstruction of the traditional view that gonorrhea is a trivial disease, easily cured, and entailing no serious after-consequences.

(2) A knowledge of the fact that apparent cures are most often deceptive; that the chief danger of the disease is its potentiality for mischief after apparent cure. (3) That the gonococci are endowed with remarkable longevity; that they may persist in a latent state, susceptible of being awakened into activity and virulence, months or years after active symptoms have ceased; that the necessary and indispensable condition of the admissibility to marriage of the gonorrheic is a clean bill of health, and the absence of gonococci from the urethral secretions demonstrated by the most exacting bacteriological tests.

The result of the false impression instilled into the minds of young men that sexual indulgence is essential to health should be corrected. It is through the medical profession that this saving and salutary influence of enlightenment must come. The family physician is peculiarly adapted by his intimate relation with his patients, the freedom which his vocation allows him to talk on topics ordinarily forbidden, and his relation as friend as well as professional adviser, to impart this information and explain matters relating to sexual hygiene in a manner always decent, but sufficiently plain.

Perineal Operation for Enlarged Prostate.

The narrowness of the male pelvic outlet becomes surgically important with the overgrown prostate, according to E. W. Andrews (*American Journal of Surgery and Gynecology*, July, 1903).

Overgrowth of prostate, says the writer, does not cause obstruction unless there is also outside pressure.

This may come from the ligaments and muscles without the organ actually pressing upon the ischia or from bony pressure.

Relieving the prostate from the fixed space behind the pubis allows it to expand and cures the obstruction.

This can be done best by an anterior incision, and should be accompanied by a cutting of the prostate ring and removing a segment extra-urethrally.

Incidentally the change of position, lowering the bladder outlet, does away with the retroprostatic pouch, and greatly assists natural drainage.

The separation of the prostatic and urethral ligament from the pubis and the weakening of the urogenital diaphragm is not to be avoided, but sought.

The Drowning of Patients in Fecal Vomit During Operations for Intestinal Obstruction and Septic Peritonitis.

E. W. Andrews (*Annals of Surgery,* June, 1903) says that flooding of the air-passages by fecal vomit is a real danger and probably has caused many unexplained deaths. Resuscitation is impossible or very difficult. The fluid may flow by gravity through the relaxed stomach sphincters directly out of the intestine, where it has accumulated in enormous quantities. The accident occurs with great suddenness and with a stomach supposedly empty. The suffocation may be so complete that no outcry is made, and may not be noticed by the attendant. It may occur as late as an hour after anesthesia, or at any time until consciousness is restored. We have no evidence that it can occur during consciousness, even *in extremis.* After septic laparotomy, patients when returned to bed should be watched without even momentary intervals to full consciousness. The suggestion made that as many as possible of such cases be operated under cocaine anesthesia is of the greatest importance.

Experimental Work on the Backing up of the Bladder Contents.

Markus (*Wiener klin. Wochenschrift,* No. 25) reports the work done by other researchers on this subject, and after citing his own work on laparotomied and non-laparotomied rabbits comes to the following conclusion: The frequent backing up of the bladder contents into the pelvis of the kidney is due either to reversed peristaltic movement of the ureter or to the contraction of the bladder with dilatation and paralysis of the ureters. If no trauma was inflicted on the pelvis of the kidney the coloring matter used in the experiment could not be demonstrated; the slightest pressure, however, would cause a lesion of the pelvis. The experiments with bacteria gave results similar to those with the pigment. After death motile bacteria wander from the pelvis into the kidney substance, the rapidity of this phenomena depending on the motility of the bacteria.

Some Observations on Movable Kidney.

T. E. Gordon (*Lancet,* June 6, 1903) is of the opinion that in neurasthenic cases nephropexy may do good. Vomiting and other gastric symptoms can certainly be cured, but if dilatation of the

stomach is present a guarded prognosis must be given. One must be most cautious in concluding that a movable kidney is the cause of obscure abdominal symptoms. Movable kidney occasionally causes symptoms which exactly simulate those due to gall-stones, but seeing that the coincidence of movable kidney and gall-stones is not uncommon, it would be unwise merely to fix the kidney without a preliminary examination of the gall-bladder and ducts. Finally, while granting that many cases of movable kidney cause no symptoms and require no operation, there remain many which do cause symptoms, and in a fair proportion of these an excellent result from nephropexy may confidently be looked for.

Bullet Wounds.

Perthes (*Deutsche Zeit. f. Chir.*, 62 Bd.) saw a number of good results obtained by Chinese physicians by spreading a red powder derived from certain plants on bullet wounds of both soft and bony tissues. Of the bone injuries a diagonal fracture of the tibia, because of its peculiar origin, is of special interest. A coolie was shot at a distance of 20 meters; the bullet passed between the tibia and fibula, springing them apart so that the diagonal fracture of the tibia and a fracture of the head of the fibula resulted. In this case the fracture did not arise at the seat of injury, but was removed from it. He also reports gunshot wounds of the bladder and small intestines which were cured by operation.

MEDICINE.

Human Actinomycosis in France and Other Countries.

During the past year thirty cases of actinomycosis in human beings were reported in France, so that the disease is not so rare as is generally supposed. M. Poncet and M. Trevenot have seen eleven cases of the disease, and its localization was very varied, for it showed itself in the rectum, in the appendix, in the lungs, and in the cervicofacial region. M. Poncet (*Lancet*, June 27, 1903) read a paper on the subject at the meeting of the Academy of Medicine, which was held on June 9. M. Trevenot and himself had noted that within the last five years 86 cases had occurred in France, 101 in Germany, 102 in America, 35 in England, 79 in Austria, and 189 in Russia. For the other European countries the figures were much lower. In relation to the extent of her territory France has an average as high as those countries where

actinomycosis is more frequent. The gravity of the complaint varies according to the place where it shows itself in the body. The cervicofacial form is the most amenable to treatment. Actinomycosis of the thoracic or abdominal walls is more serious; visceral affections are still more grave as regards prognosis; and finally the pulmonary form is often fatal.

Actinomycosis is undoubtedly in some cases transmitted directly from animals to man, but in the majority of cases its origin is from the vegetable kingdom. The more poorly a man lives, the more likely is he to be infected. The disease is more common in the country than in towns, and more especially in those countries which are given up to growing cereals and fodder. The most successful treatment is iodine in some form, either applied locally or in the form of iodides, together with scraping and cauterization. Actinomycosis should always be thought of in cases of suppuration, and the pus should be histologically examined, for this is the sole method of forming a diagnosis and so of arriving at a rational method of treatment.

Amebic Dysentery.

Leonard Rogers (*British Medical Journal,* June 6, 1903) draws the following conclusions:

Amebic dysentery is most frequently found in patients dying from large tropical liver abscess, in the walls of which amebæ can always be found unless they have been opened for some time. The disease is chronic, and often latent; it is not very often fatal in itself, but usually through complications.

Amebic dysentery has naked-eye and microscopical characters which enable it to be easily distinguished from the more common bacillary type of the disease.

Its most important complications are large abscess of the liver, chronic or acute peritonitis, and postperitoneal abscess. Amebic abscess of the liver secondary to this form of dysentery may be produced (1) by infection across the peritoneum, with or without previous adhesions; (2) or through infection by the portal vein producing sufficient clotting in its branches to cause a focal necrosis in one or more parts of the liver, concentric extension taking place by means of a similar process.

If staphylococci reach the liver with the amebæ, as especially occurs when gangrenous sloughing of the bowel wall complicates amebic dysentery, then multiple small abscesses in the interlobular

branches of the portal vein containing both amebæ and staphylococci result.

The bacillary form of dysentery is much commoner in Calcutta than the amebic one, and is due to Shiga's bacillus, which is clamped by the blood of cases of ordinary dysentery, although not by that of the amebic form, thus furnishing a method of differentiation between them clinically.

The Leucocytosis of Variola.

Variola, according to A. R. Ferguson (*Journal of Pathology and Bacteriology,* May, 1903), in all its manifestations is accompanied by leucocytosis. This reaches its maximum on or about the ninth day of the disease, after which it slowly wanes, or may later undergo an increase due to complications. It is most notable in cases undergoing marked and generalized pustulation, and although of moderate degree, is still present in transient fashion in the most severe cases.

The characteristic feature of variolar leucocytosis is the relative and absolute increase of the smaller hyaline cells and lymphocytes by which it is accompanied, a condition associated regularly with a relative reduction of the polymorphoneutrophile elements, though these absolutely are augmented.

This characteristic leucocytosis is maintained for a considerable time after the acute stage of the illness has passed.

In the more severe class of cases it is characterized by the presence in the blood of elements normally occurring in the bone-marrow, in numbers which are not often realized in the other acute infectious diseases. These include, besides the mononuclear neutrophiles, neutrophiles of transitional type, mononuclear eosinophile cells, and nucleated red corpuscles of both varieties.

The Influence of Certain Alcoholic Liquors and Tea and Coffee upon Digestion in the Human Stomach.

R. F. Chase (*Philadelphia Medical Journal,* June 6, 1903) has recently made an extended series of experiments to ascertain what influence a drink of whiskey, a glass of beer, and a cup of tea or coffee has upon digestion in the human stomach when taken at meals. The writer says that his tests with tea and coffee show that, when taken with meals, in the amounts ordinarily used, they do not retard either salivary or peptic digestion, but that in fact

salivary digestion is accelerated slightly by tea. His results also show that these beverages may act as mild stimulants to gastric secretion; the digestive power of the secretions, however, is not augmented, and on the other hand it is not impaired, as in the case of whiskey. Therefore as a stimulant to gastric secretion, tea or coffee would seem preferable to whiskey. In the tests with these beverages the author used strong, black tea, and a 10-per-cent strength of coffee (coffee 10 gm., water 100 Cc.). Both the strength and amounts used were sufficient to show any harmful effects which might be produced by these fluids as ordinarily drunk. Thus far he has been unable to find reports of any experiments with these beverages made upon the human stomach, therefore he can offer neither confirmatory nor contradictory observations from such sources.

Admitting the generally harmful effects of large quantities of tea and coffee, and that even moderate amounts, when taken with sugar and cream, disagree with some individuals, he believes that an undue prejudice has been excited against the use of these beverages by the results obtained from laboratory experiments.

The Blood in the Typhoid Fever of Children—A Clinical Study.

F. S. Churchill (*Boston Medical and Surgical Journal*, June 25, 1903) concludes: (1) The blood in the typhoid of childhood differs from that of adults only in degree. (2) The erythrocytes are reduced in number, especially during the first three weeks, after which they begin to increase rapidly, reaching normal in the fifth week. (3) The hemoglobin suffers more proportionately than the erythrocytes. (4) The leucocytes are reduced throughout the first four weeks, the lowest average being reached during the second week, except in severe and tedious cases. (5) The leucopenia is of diagnostic value, especially in children, in whom most febrile affections produce a leucocytosis. More data are needed to determine the priority of appearance of a "positive" serum reaction or leucopenia. (6) The relative proportion of the different varieties of leucocytes varies at different periods of the disease, the greatest variations being found in the polymorphonuclear and mononuclear elements—the former diminish and the latter increase as the disease advances. The increase in mononuclears is chiefly in the lymphocytes. Analysis of large numbers of cases grouped by age and weeks is desirable.

On Streptococcus Infection of the Lungs.

A case of pure streptococcus infection of the lungs and pleura is reported by D. Lawson (*Edinburgh Medical Journal,* April, 1903). The following comments are made by the writer: (1) The low diet treatment in this case at least failed to reduce temperature or to improve the general condition of the patient. (2) No tubercle bacilli were found in the sputum, although the physical signs at the apex of the left lung were pronounced. (3) The exocardial murmur was due to compression of the air contained in the pulmonary cavity by the cardiac systole, and not to any purely cardiac factor. (4) The author found inspections of the cavity in the apex of the left lung through the upper wound by laryngoscopic mirror and small electric hand-lamp quite practicable. (5) In regard to the physical signs it was noticed edema of the chest wall was clearly demonstrated by pressure of the stethoscope over its lower one-third behind. The breathing signs over this region never became entirely occluded; they were faintly heard, and gave an impression of distance.

Congenital Inspiratory Stridor.

D. C. Greene (*Boston Medical and Surgical Journal,* June 11, 1903) thinks that at the present time the diagnosis of this condition is not well understood. Although deformity of the epiglottis is not the cause of the stridor, yet such deformity is always present. The diagnosis of this affection is based on the following distinctive features: (1) Its appearance at birth; (2) the limitation of the sound to inspiration; (3) the absence of continuous cyanosis; (4) the constancy of the sound independent of the position of the child; (5) the laryngoscopic appearance of the epiglottis and aryepiglottic fold. The prognosis is good. The treatment is purely prophylactic. In very rare cases tracheotomy or intubation may be indicated.

The Occurrence of Glycogen in Inflammations and Suppurations.

Best (*Ziegler's Beiträge z. path. Anatomie,* Bd. 3, 1903) demonstrates glycogen by means of a new carmine stain which probably has a chemical affinity for it. Pure glycogen is not found in the organism (liver, leucocytes, tumor structure), but a modification of it probably in combination with an albuminous

body. He could demonstrate this glycogen in tumors and their surroundings, also in acute and chronic inflammation, not only in the polymorphonuclear leucocytes of the inflamed foci, but also in the surrounding tissues. He agrees with Marschand and Brault that the occurrence of glycogen is not a sign of degeneration, but only an evidence of increased cell activity.

Freezing of Milk.

Bischoff (*Archiv für Hygiene*, Bd. 47, 1903) examined milk put up in patent bottles which had been kept frozen from several days to three months. The results of the examination showed that milk kept only at a moderately cold temperature is preserved for only a few days. The growth of bacteria is retarded. If the milk is frozen its stability is greatly increased, but it is dependent on its rapidity of cooling. By continued freezing a number of flocculi form in the milk, which however are redissolved by heat; after three months' freezing they are insoluble. It was found that small quantities of frozen milk will remain sterile for a longer time than larger quantities so treated.

Transmissibility of Tuberculosis to Different Animals.

Wiener (*Wiener klin. Wochenschrift*, No. 20) inoculated hens with cultures of equine tuberculosis by placing cultures in collodion sacks in the abdominal cavity. After several months the cultures were examined, and it was found that the bacteria evidenced the properties of avian tuberculosis. In another series of experiments healthy rabbits were inoculated both intraperitoneally and subcutaneously with sacks of avian tuberculosis. The animals remained perfectly healthy, and the bacilli were found to show properties which were entirely different to avian tuberculosis.

THERAPEUTICS.

The Action of Arsenic on the Bone-marrow of Man and Animals.

R. Stockham and F. J. Charters (*Journal of Pathology and Bacteriology*, May, 1903) are of the opinion that arsenic in repeated small doses acts on the bones and marrow, causing

increase in the number of leucoblastic cells, little or no change in the number of erythroblastic cells, marked hyperemia, and atrophy of fat cells. During this stage there is no increase in the red corpuscles or hemoglobin of the blood.

In repeated doses, large enough to cause cachexia and emaciation, the bone-marrow undergoes hyaline degeneration.

This is accompanied by decrease of the red corpuscles and hemoglobin of the blood.

All these changes occur with other drugs and poisons, and are not peculiar to arsenic.

Arsenic has no direct effect in increasing the production of red blood-corpuscles by the bone-marrow.

The "hematinic" action of arsenic in pernicious anemia, malaria, lymphadenoma, leukemia, and some other diseases, probably results from a specific action on the parasites which cause these diseases, and not from any direct action on blood formation.

The Action of Bismuth.

G. Fuchs (*Deut. med. Woch.*, April 2, 1903) has studied the question and found in his test-tube experiments that mixtures of bismutose in distilled water, when exposed to the light, change in color to gray, and later to black.

This reduction, he found, takes place in the stomachs of dogs, and after a careful survey of his investigation he comes to the conclusions that: (1) Calcium carbonate, magnesia usta, and like chemicals, are not capable of being substituted for bismuth in the treatment of gastric ulcer; (2) the secretion of mucus after the introduction of bismuth subnitrate is not due to the mechanical action of the crystals, but is due to a specific action of the salts of bismuth; (3) the curative action depends on the reduction of the bismuth salts, and the reduced oxydul penetrates into the granulation tissue and forms a protective to it; (4) bismutose appears to be the most useful preparation of bismuth on account of its easy reducibility.

Adrenal Extract.

G. A. Weil (*Revue de Thérapeutique*, June 15, 1903) advises the use of adrenal extract with cocaine (1 to 200 or 100 solution of cocaine to 1 to 2000 or 1000 solution of adrenal extract) in minor surgery, given hypodermically.

The action of the cocaine is greatly increased, while the con-

dition of ischemia induced by the adrenalin extract permits of a dry operation. The adrenal preparation also prevents absorption of the cocaine. A solution of adrenal extract 1 to 1000 is suitable for application on mucous surfaces. It arrests hemorrhage, and to a great extent reduces hypertrophy of the tissues. As a general therapeutic agent its indications are limited to accidents due to chloroform, and to certain deeply seated hemorrhages due to a morbid condition of the hematopoietic organs. It is better to administer it intramuscularly than through the stomach. Should the drug cause syncope the patient must be placed in a recumbent position, with loosened garments. Should more serious accidents follow, subcutaneous injections of ether are to be administered, and energetic friction of the body.

Treatment of Pruritus.

Dr. Leo (*Therapeutische Monatshefte,* December, 1902) treated a man suffering over one year with pruritus. The patient's urine was cloudy and strongly alkaline, and cleared up with the addition of acetic acid; otherwise he was in good condition. Thinking that the itching was due to the decided alkalinity of the blood, which evidenced itself in the urine, he administered first organic and then inorganic acids in gradually increasing doses; he also increased the albumins in the food. This treatment resulted in a complete cure. In two cases of general pruritus and one of the vulva the effect of the acid addition was decidedly beneficial.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

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The Prognosis of Chronic Suppurative Otitis.

T. J. Harris (*Archives of Otology,* June, 1903) says that chronic otorrhea in a large percentage of cases is amenable to suitable medicinal treatment. In addition to proper attention to the disease of a general character and to nasopharynx, peroxide of hydrogen, with or without formalin solution, gives the best results, all minor operative procedures, of course, first being attended to when necessary.

The results of such treatment are in a large number of cases permanent.

The risk of an uncured otorrhea with good drainage is relatively very small (one-half or two-thirds of fatalities).

Medicinal treatment failing, after a suitable interval of time the danger of fatal complications in the absence of all symptoms should be laid before the patient and the promise of relief by operation stated.

Where there is no good reason to the contrary, such as intracranial or mastoid complications, the intratympanic method by ossiculectomy should be preferred, because its results as regards cure are equally good; the risk of loss of hearing is vastly less; the danger of unpleasant sequels, such as facial palsy, is avoided; the possibility of prolonged after-treatment is obviated.

The radical operation is not without risk to life.

Where ossiculectomy fails or mastoid or other symptoms exist, pointing to extension of the disease into the bone, it then becomes the suitable and valuable method of relief.

The protecting and assisting power of nature is never to be lost sight of.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

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Double Pregnancy in a Double Uterus.

J. B. Hellier (*British Journal of Obstetrics and Gynecology*, May, 1903) describes a case of double pregnancy in a double uterus. The patient, a woman of thirty-four, had had three previous normal labors, and there was no reason to suspect any abnormality of the genital organs. She ceased to menstruate in May, 1902. During pregnancy the uterus was unusually large, and the patient complained of abdominal pain and swollen feet. Labor began on January 28 in the forenoon, and a living female child was born at 5.30 P.M., the head presenting; the placenta followed. The presence of a second child was then recognized, but the uterus showed little tendency to expel it. At 11 P.M. Beetham (the doctor in charge) introduced a hand into the uterus and found it empty. At 12 P.M. the patient was examined by Hellier and Beetham, and a second os uteri was found above, in

front and to the left of the first. A second fetal head was just within touch. It was possible to grasp the septum dividing the uterus between the finger placed on the left and the thumb in the right os. There was no trace of a septum within the vagina. By podalic version a living male child was delivered from the left side of the uterus. There was nothing to suggest that the two pregnancies were not of the same date. At an examination of the patient a month later it was found that the septum uteri was retracted within the os, and might easily escape notice on a simple vaginal examination. The bifid fundus was obvious.

Fecundation After Curettage.

D. Y. Gonzalez (*Medical Press*, June 17, 1903) says that curettage is not a cause of sterility, but on the other hand fecundity is restored by the operation. Sterility is not however cured by the operation. Endometritis following abortion is very amenable to the operation. The more recent the lesion the better the results.

Within six months of curetting the majority of patients become pregnant. If pregnancy does not occur within twelve months, its occurrence is unlikely.

Of the twenty cases, two were nulliparæ, four uniparæ, and fourteen multiparæ. The diseases included eleven cases of post abortum endometritis, four cases of catarrhal metritis, thirty of metritis hemorrhagica, one of septic metritis, and one of retroversion. After curettage twelve women were each once confined, three women were each twice confined, and one woman was three times confined; three women aborted; and one woman was at the time of writing pregnant. Within a year of the operation eleven women were confined, and within two years, but over one, five women were confined.

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ORIGINAL CONTRIBUTIONS.

THE TREATMENT OF PULMONARY TUBERCULOSIS.

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I have absolutely nothing new to offer concerning the treatment of the disease named in the caption of this paper, but I wish to express briefly my own views, founded upon reading and a lengthy and somewhat extensive experience.

It is fortunate that the infective power of the tubercle bacillus is comparatively feeble. Were it as strong as that of the germs of some other diseases, smallpox for example, all endeavor to prevent its dissemination and to control its effects would be useless. But understanding, as we do in a measure, the limits of its infective powers, and the inherent power of resistance to its ravages constantly shown by the human organism, and knowing that many recoveries occur through the unaided efforts of nature, and through the efforts of nature aided by our art, there is strong encouragement for us to continue the effort, which began almost with the dawn of time, to overcome the most persistent and dangerous enemy of our race. The experience of the ages past has demonstrated the uselessness of all special, and in large measure of all medication, and we are forced to consider prevention and general sanitation as the only means by which we may control the malady.

Since the discovery of Villemin, and the more recent advances in sanitation, much has been done in the way of prevention, but while through the influences mentioned, and perhaps others not yet well understood, tuberculosis is diminishing in all civilized countries, much more must be accomplished before it can be said that it is even measurably under control; for it is still the cause of seven per cent of the total mortality of the earth. To forward the end it is necessary that we of the medical profession shall

extend our own knowledge, and that we instruct the laity in regard to the communicability of the malady and the steps necessary to prevent the dissemination of its cause. When it is generally understood that the disease is directly communicable through the depraved secretions of the infected body, mainly through the expectoration, and that the sufferer disseminates the contagium as he walks, it is to be hoped that the main source of infection may soon cease to exist. When it is understood (as has been the popular opinion in Italy for 400 years) that a tuberculous member of a family is a constant menace to all other members, and the invalid is placed for the night in a separate chamber, another fruitful source must cease.

It should also be generally known that infection is not conveyed by contact, through halitus or gaseous emanations, through the expectoration or other secretion when moist, but mainly through the expectoration after it has fallen upon the ground, become dry and reduced to the pulverulent state, to be borne with the dust by the winds in every direction and often to great distances, to find entrance to the body through the respiratory and possibly other mucous surfaces. What has been stated in regard to the presence of the bacillus in the expectoration is true also of the excretions from the intestinal canal, the kidneys, and possibly of the perspiration, and in order that the danger of infection may be reduced to the minimum, not only the discharges from the lungs, but those from other parts, should each day be carefully collected and disinfected or destroyed by burning.

The widely prevalent opinion that the infection may be conveyed through articles of food, particularly milk and the flesh of tuberculous animals, though, as appears from recent experiments, it may not be well founded, demands consideration, for though the bovine and the avian bacillus be not communicable to man, milk and meat from diseased animals cannot be considered wholesome, and though thorough cooking destroys the tubercle bacillus, both should be rejected like other tainted articles of food. If the infection cannot be conveyed from animals to man through their flesh and milk, as taught by Koch, the medical profession is responsible for the unnecessary expenditure of vast sums of money, and much discomfort and mental distress.

Much help is gained from the influence upon the general health and upon the bacillus by the free admission of light and air into habitations of all kinds, and the avoidance of crowding. The notable diminution of tuberculosis in London, Boston, New York, and other large cities may be attributed in a large measure to the improvement in the dwellings of those cities. Dwellings which

have for a length of time sheltered one or more persons suffering from the disease eventually become infected, and the surviving members of the family should be warned and appropriate measures for the destruction of the bacillus taken.

The public should be taught that cleanliness of person and premises, and the avoidance of excesses, especially in the use of alcoholic drinks, are strongly protective against all diseases, tuberculosis included.

Climatic and Hygienic Treatment.—While the number of cases is undoubtedly reduced by preventive measures, climatic and hygienic treatment affords the only hope after infection.

Change of habitation, when made early in the progress of the malady, and before there is extensive destruction of tissue, is often followed by speedy improvement, and if associated with other appropriate measures, is often sufficient for the cure. Except so far as the personal comfort of the patient is concerned, the results obtained in various countries seem to prove that the choice of climate (avoiding extremes) is not important; but other things being equal, it is better to select a locality where the patient can spend a great part of the day in the open air without discomfort, and consequently more patients should be sent, say from Ohio, to a more equable or warmer climate, the choice being governed by the condition and often the preference of the patient.

Residence in Florida is objectionable because of the liability to malarial infection, but residence in the southern part of the State, say Palm Beach, during the winter months, when mosquitoes are less abundant, is to be preferred to residence in Ohio or any of the States so far north. The climate of California is also better than that of Ohio. Most points on the coast are objectionable on account of the difference between the temperature of the day and night, but some of the interior valleys, while too hot during the summer, are admirably adapted for winter residences. Owing to the great dryness and cleanliness, and, as many think, the altitude, the climates of Colorado, New Mexico, and Arizona are beneficial, as proved by the results in thousands of cases. Unfortunately, the number of persons who have gone to Colorado is so great that the bacillus (as in Minnesota, which forty years ago was considered better than any other resort) has become implanted, and tuberculosis originating there is as common as elsewhere; and while many thousands who still go annually with the hope of recovery are cured or benefited, the effects of the changes are not so notable as in former years. Fort Bayard and Las Cruces in New Mexico, and Tucson, Phoenix, and Yuma in Arizona, are becoming popular, and are undoubtedly good locali-

ties for winter residence. Within the last year or two typhoid fever has become rather common in Phoenix, and is of course a menace to all susceptible persons.

Were suitable accommodations obtainable, the interior of the central portions of Cuba, the Isle of Pines, and the Tierra Templado, of Mexico, would be almost ideal localities. Many have been benefited by a sojourn at Orizaba in Mexico. The climate of the Bahama Islands is remarkably favorable, especially for neurotic and excitable subjects, and those who suffer from hemorrhages and cardiac lesions, but the isolation of the group and the lack of accommodations, except in the city of Nassau, which is on a very small island, causes one to hesitate before recommending those islands to any except those of adventurous turn.

Of northern regions, judging from statistics, and to a limited extent from personal observation, I am of the opinion that the western portion of Oregon and that of the State of Washington, although in the latter the humidity is very great, deserve more attention than they have had, and that both regions will eventually become popular. Many persons suffering from hemorrhages, after having failed to get relief in other places, have recovered at Tacoma, and on the islands in Puget Sound. And many suffering from subacute and chronic bronchitis have recovered during sojourns on the north shore of Lake Superior, where the air is singularly pure and bracing, and doubtless, when suitable accommodations have been provided, that region will become a favorite resort for persons suffering from tuberculosis.

European physicians, regarding purity of atmosphere rather than temperature, select almost extremes of climate. Davos, and St. Moritz in the Engadine, with a dry and cold but pure atmosphere, are popular resorts with excellent accommodations, and many attest the benefits of prolonged residence in the one or the other place. The southern parts of Europe, including the Riviera and the Ionian Islands; Egypt, Algiers, in North Africa; the island of Madeira; these are all regarded with favor, though Madeira, owing to constant heat and the implantation of the bacillus, is not so popular as in former years, and in Algiers there is lack of suitable accommodations.

The British physicians early recognized the benefits of the climate of South Africa. Residence in the interior of Cape Colony, and particularly in the Transvaal, which has an elevation of between five and six thousand feet, and dry pure air, has proved curative in numbers of cases.

The location selected should be as nearly as possible free from dust, not subject to sudden and extreme changes of temperature,

and protected from high winds. It is claimed by many that high altitudes affect patients favorably in more than one way; but it may be stated in brief that the benefit is mainly, if not solely, due to the necessity for more thorough expansion of the lungs for the full supply of oxygen, and the complete aeration of the blood. Other advantages, except that the air of mountains, from sparsity of population, is generally free from infectious organisms, are fanciful and unworthy of consideration. Equal advantage may be obtained anywhere by walking up and down hill.

While good results are obtained by residence in mountainous regions, other conditions being equal, it is better to select localities with temperate climates, as of North Carolina and Colorado, in order that the patient may take as much outdoor exercise as is compatible with his strength.

A location with some elevation and a dry and equable climate is better, generally speaking, than one but little above the sea with more moisture and greater changes. But persons of excitable habit, and prone to hemorrhages and febrile attacks, do better at points near the sea level, and where there is more moisture. Persons with weak or distressed hearts should not be sent to high altitudes.

Two invalids should never be permitted to occupy the same apartment.

The modern plan of placing tuberculous patients in special sanatoria or hospitals is based upon the ideas which have been expressed, and upon others equally important, of which the first is the separation of the sick from the well; secondly, the destruction of the bacillus can be more effectually accomplished; and thirdly, the sufferer can be more systematically fed and treated than in the average dwelling or in a general hospital. The plan has been successfully followed at Saranac Lake, in the hospital under the charge of Dr. Edward J. Trudeau, for a number of years, and has been adopted in many other places in the United States, Germany, England, and other countries, and will probably rapidly become general. There are already more than thirty such hospitals in the United States in full operation, and many in process of construction. The United States government has established a hospital at Fort Bayard in New Mexico for the treatment of tuberculosis among soldiers, and the official reports in regard to the results are singularly favorable, bearing out the general impression of the good influences of the climate of the region in which Fort Bayard is located. It does not appear from recent reports from various countries that the location of such hospitals, when properly constructed, if the air is free from impurities (the

tubercle bacillus included), is a matter of consequence. A high and dry locality is to be preferred, but with proper regulations in regard to diet, cleanliness, dress, air, and outdoor exercise, patients seem to do as well in one place as another.

While it is important that the patient should be required to take as much muscular exercise as his strength will permit, fatigue should be avoided.

Sleep is as important an element of the treatment as exercise. Patients, until they have regained strength, should spend from eight to ten hours of the twenty-four in sleep, or at least in bed. The advantages claimed for high localities are in a measure balanced by the difficulty which many experience, especially those who are anemic and neurotic, in such localities in obtaining sleep. In the *Denver Medical News* (June, 1900) Dr. J. T. Eskridge published an analysis of the relation of the climate of Colorado to sleep in the acclimated and in the unacclimated. In his summary he states that although people of regular habits have continuous and refreshing sleep, those of irregular habits sleep badly and are more depressed than at the sea level. "Slight disturbances affect the sleep to a greater degree than at sea levels. Less time is required to be devoted to sleep in Colorado (just why, Dr. Eskridge does not inform us). In people who are mentally overworked the sleep is broken and less refreshing, and shorter than at lower altitudes. Persons of nervous tendencies do not sleep well unless they avoid excessive physical exercise. Neurasthenics are troubled with disturbed sleep unless they have an abundance of physical and mental rest, thus avoiding all things that disturb the mind and digestive organs. Tuberculous subjects sleep well if they avoid overexercise, and as their nutrition improves. The unacclimated tourist who exercises freely suffers from disturbed sleep. Among nervous subjects the unacclimated is especially irritable, and his sleep disturbed. Unacclimated tuberculous subjects sleep worse unless precaution is taken to lessen the usual amount of exercise." In order to secure unbroken sleep, the room should be well supplied with pure air. The temperature should be such as is agreeable to the patient. The bed should be a hair mattress, and the covering should be sufficient, but neither too thick nor too thin.

Circumstances permitting, a tepid sponge-bath before retiring, which many tuberculous subjects avoid from the impression that they are more liable than other persons to take cold, greatly promotes comfort and the probability of sound sleep. The bath may be repeated at the hour of rising.

Strict attention should be given in every case to the condition

of the digestive organs, so frequently disordered in tuberculosis, and the diet should be nourishing, prepared in palatable shape, and regulated in quality and quantity to suit existing conditions.

The clothing should be comfortable, neither too heavy nor too light. Changes should be made to suit variations in temperature, and a complete change should be made at night.

It is gratifying to note the rapid improvement in health which occurs under the course which has been described; when it fails, the office of the physician becomes, as Voltaire wrote, "a melancholy attendance upon misery," too often aimless, and always hopeless.

NOTES ON TYPHOID FEVER.*

BY E. N. HALL, M.D., BOWLING GREEN, KENTUCKY.

Typhoid fever is an acute infectious disease, the definite cause of which is now recognized to be the bacillus typhosus; it is characterized pathologically by hyperplasia and sloughing of Peyer's patches, clinically by an insidious onset, peculiar temperature curve, splenic enlargement, rose-colored spots, diarrhea, tympanites; liability to certain complications—intestinal hemorrhage, peritonitis, heart failure, etc. The disease has an average duration of three to four weeks.

The lesions produced by typhoid fever may be conveniently divided into two groups, viz.:

1. Primary, due to direct effect of the bacilli upon lymph follicles of the intestines, mesenteric and other lymph glands, and the spleen.

2. Secondary, due chiefly to long-continued fever and to secondary infection, for the occurrence of which the essential lesions of typhoid fever furnish the "golden opportunity."

The primary morbid changes in Peyer's patches and solitary glands of the intestines are usually divided into four stages: (1) The stage of infiltration; (2) necrosis or sloughing; (3) ulceration; and (4) healing.

Modes of Conveyance.—Typhoid fever is not regarded as a very contagious disease, yet the possibility of direct transmission must be acknowledged. The poison appears not to be given off by the skin or breath, but through the medium of the alvine and perhaps also the urinary discharges, rendering those who come in contact with these excretions and the body linen of typhoid

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patients peculiarly liable to infection. Several instances in which nurses appeared to have been infected under such circumstances have come under the writer's observation. Contaminated water is unquestionably the most common mode of conveyance. I believe this has been abundantly proven.

I remember a family in which there had occurred from one to four cases of typhoid fever each year; the water used came from a well located on low ground; the horse lot even drained into it. I persuaded them to discontinue the use of this well and construct a modern cistern; this was done several years ago, and there has not been a case of typhoid in that family since.

The greatest number of cases of typhoid fever that I have observed have occurred in homes where the water-supply came from wells or springs, fewest in homes where cistern water was used. Typhoid epidemics seldom occur in the section of the State in which I practice, only sporadic and endemic cases being seen, the cause being purely local.

Symptoms.—The period of incubation lasts from a week to ten days, during which there is lassitude and inaptitude for work; the onset of the disease is rarely abrupt. Prodromal symptoms may occur, either a rigor (which is rare), chilly sensations, headache, nausea, loss of appetite, pain in the back and legs, epistaxis, etc. The symptoms soon increase in severity, and the patient is forced to take to his bed; from this event, in the majority of instances, the definite onset of the disease may be dated.

With the progress of the initial period the symptoms increase in severity with considerable rapidity; the temperature gradually rises for four or five days, when the second stage (fastigium) is reached. There is then anorexia, great thirst, intense headache, disturbed sleep; the skin is hot and dry to the touch, tongue slightly coated, constipation often marked; the pulse is quickened, ranging from 90 to 110 per minute, abdomen distended and tender, spleen more or less enlarged.

The so-called second stage usually commences on the fourth or fifth day and lasts about two weeks. During this period (second week) the general symptoms become more marked: the temperature remains high, usually 103° to 104° F. in the evening; the tongue is heavily coated; abdominal distention and tenderness increase; constipation is replaced by diarrhea; the spleen is more decidedly enlarged; about the eighth day rose-colored spots (which are pathognomonic) appear on the trunk; headache is superseded by mental torpor and dulness; the expression is anxious; the lips are parched, tongue dry; diarrhea, tympanites, and abdominal tenderness increase; and the patient begins to

emaciate. Death may occur during the second week from pronounced nervous symptoms, intestinal hemorrhage, or perforation.

During the third week, in cases of moderate severity, the pulse ranges from 110 to 130 per minute, the temperature shows marked morning remission, and there is gradual decline of fever. Emaciation becomes more manifest and weakness more pronounced. Diarrhea and tympanites may persist. The unfavorable symptoms which may develop at this stage are pulmonary complications, increasing feebleness of the heart, pronounced delirium, and muscular tremors. The special dangers are heart failure, intestinal hemorrhage, and perforation.

In favorable cases convalescence usually begins during the fourth week. In fatal cases all the symptoms become aggravated: the patient gradually grows weaker, the pulse more rapid and feeble, there is increased dryness of the tongue and lips, which become fissured and cracked, tympanites becomes more marked, the patient lies in profound stupor, with low muttering delirium and subsultus, the feces and urine pass involuntarily.

Treatment.—The patient should be strictly confined to bed in a well ventilated room from the outset until convalescence is well established. I always endeavor to get my patient in the best possible physical condition, subject him to a thorough course of quinine, and administer such other medicinal agents as will promote elimination. I begin early in the disease with rigid instructions as to dietary, never allowing the patient anything but a strictly liquid diet, milk being preferable to anything else. If sweet milk is not suitable in a given case, I substitute buttermilk, and if neither can be taken I give panopepton, which is usually well tolerated as an article of nourishment.

To guard against heart failure in the later stages and to sustain the nervous system, which is always of great importance, I begin the administration of strychnine early in the attack, giving 1/30 to 1/20 grain every six hours. I also administer alcoholic stimulants quite freely, beginning with the end of the second week. When the temperature rises above 103° F., or when there is very much delirium, a sponge-bath is ordered at intervals of two hours. If the desired results are not thereby obtained I apply Larrabee's ice-cap, which acts admirably in lowering temperature and relieving delirium. I rarely administer any of the antipyretics in the treatment of typhoid fever, but phenacetine in small doses sometimes acts beneficially.

I advocate the use of the water-bath, as cold as can be borne by the patient, but this method is inconvenient in country practice.

If there is much tympanites, relief may be obtained by the use

of properly applied turpentine stupes; cloths should be wrung out of hot water, then sprinkled with turpentine and applied to the abdomen, and covered with dry cloths to protect the clothing.

It is always well to exclude every one from the sick-room except attendants and nurses, and the latter as well as the former should be the best procurable; the trained nurse is to be preferred.

When constipation exists I often administer a small dose of calomel, followed in eight or ten hours by castor oil.

If there is diarrhea I give salol and bismuth combined with chalk mixture.

Should intestinal hemorrhage occur it is controlled with opium and acetate of lead.

The excretions must be thoroughly disinfected to protect others from infection.

Antityphoid serum has been highly recommended, but I have had no experience with this method of treatment.

I never allow my patients to partake of solid food until at least ten days after fever has subsided.

DISEASES OF THE MIND.*

BY E. A. CHERRY, M.D., MORGANTOWN, KENTUCKY.

Diseases of the mind have not been closely studied by the general practitioner from the fact that so soon as a patient becomes insane, or has melancholia, he is either referred to a specialist or sent to an insane asylum. My remarks in this paper refer to the management of patients who for the first time have become melancholic.

Melancholia and insanity have been variously defined by different authors. Esquirol defines insanity as a cerebral affection, ordinarily chronic, without fever, with disorders of the sensibility, of the intelligence, of the will. Pyrol recognizes four forms of insanity, viz.: (1) mania, (2) melancholia, (3) dementia, and (4) idiocy. I believe the courts have not been disposed to accept the ordinary medical definitions of insanity and melancholia. Blackstone said that a lunatic was a person who hath had understanding, but by disease, grief, or other accident had lost the use of his reason.

I wish to speak of melancholia as being a disorder of the faculties of the mind accompanying a defect of the patient's social relations, or a false conception of judgment and reason; or that an

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uncontrollable violence of the emotions and will have separately and conjointly been produced by disease—in other words, a disorder of the mental faculties, more or less permanent in character, but without loss of consciousness and will. It is noted by delusions, illusions, and hallucinations.

As few subdivisions as possible will suffice for the general practitioner: (1) melancholia, (2) mania, (3) dementia, and (4) paresis answer every requirement. This division is also in accord with recognized psychic manifestations of the human mind. The time has not yet arrived when a classification can be based upon the pathological conditions of the insane, because too little is known of them.

Melancholia is a name now usually applied to a form of insanity characterized by great mental depression, but formerly it was used to denote a partial insanity. The sufferer feels his whole existence, mental and physical, overwhelmed and oppressed by gloom, anxiety, and foreboding. At first this may be only a "feeling" which takes no definite shape, and there may be no delusions; sometimes (though rarely) there are none throughout the course of the disease. The morbid feeling which constitutes the disorder in this form has been called simple melancholia. Its access is almost always gradual and may be attributed to grief, overwork, jealousy, worry, love, etc., though it often happens no mental or moral cause can be found, and we are obliged to attribute it to inherited predisposition, some debilitating illness, declining strength, or advancing age. Some patients are aware that there are no real grounds for their sorrow and sadness, and are able to look upon it as an illness. Others feel that there must be some cause for their despondency, that something terrible is impending, though they know not what. The majority of these patients can converse and argue rationally on subjects unconnected with their feeling of misery. The bodily health, even if at first it appears good, soon participates in the disturbance.

Melancholia with delusions is far more common than simple melancholia, and it is this form we are most commonly called on to treat. The patients may feel utterly changed, which they may attribute to various causes, and which deduces various results in their condition. A variable line of symptoms is often present. Puerperal and climacteric insanity is almost always melancholic.

It cannot be too strongly impressed upon the medical profession that all melancholic patients, even those where the disorder seems simple and slight, are especially apt in the early stages to commit suicide. All of us have witnessed instances in which melancholiacs have taken their own lives, where if they had been

properly cared for in the earliest stages of the disease they would not have committed suicide, for it is this class which is most amenable to rational treatment. An asylum is not always requisite for such patients if their insanity has been of sudden development. I believe, from my experience, that all such patients before being committed to an insane asylum should be treated at home for several weeks, provided their means permit proper companionship, home comforts, bath-rooms, gymnasiums, and other means of exercise; but such patients must not at any time be left alone. And if all this cannot be provided for in their homes, of course an asylum is the proper place for them. Quite a number of patients under my observation have committed suicide while suffering from slight melancholia.

Case 1.—A robust young woman, aged eighteen years, married a widower with six young children, and in five years of her early married life she gave birth to four babies. The oldest of her children became afflicted with hip disease and was sick two years. I was called in consultation to see this lady with the family physician, and was given the history that she had suffered from continued and recurrent malaria. The diagnosis was found to be correct, but in addition it was discovered that she had melancholia of the delusive type. I suggested that she be immediately released from her motherly cares, impressing upon the husband that this course was necessary for fear her condition would otherwise become aggravated. But the family not realizing the serious nature of the melancholia left her alone on one occasion; she got out of bed, went to the well in the front yard, and jumped in head foremost, in which condition she was found drowned.

Case 2.—Mr. E——, aged fifty-six years, became ill with bronchitis, suffering about six weeks, and later developed melancholia. The family were warned not to leave the patient alone at any time, but like almost all others, not realizing the serious nature of the trouble, he was permitted to leave home one night alone, and was found next day hanging dead in the woods.

Case 3.—Another case was a lady aged twenty-three years, the mother of two children, who lived in the second story of a frame building. It was noticed by friends that she seemed despondent, as though in deep grief, and was one day found hanging dead to a door. She had tied a rope to the door-knob, climbed up on a chair, put the rope over the top of the door and around her own neck, then kicked the chair out, in which condition she was found dead.

Case 4.—I was called some distance to see a friend of mine who was suffering with melancholia. The peculiar feature about

his case was that he insisted he was not in the least sick. For days at a time he would speak to no one, and would insist that those who were once his close friends were now his enemies. While he was always moral and temperate, he became extremely so after melancholia developed. No one could see him undress, and he would read and pray at any time. He was regular in his habits, such as bathing, eating, and attending to nature's calls. His friends became alarmed at his condition and speeded him away to a private infirmary, where after treatment he improved sufficiently to again attend to business.

These cases are merely cited because they appear to me as being so very lamentable.

I wish to mention in the way of caution: If there is a rapid pulse with rising temperature in a melancholic patient, it suggests sepsis, meningitis, or both. I have seen two cases of melancholia or mania which terminated fatally in this way.

Of course it is recognized that patients suffering from various forms of mania are proper subjects for insane asylums. Their own safety and protection to society alike require that the power shall be exercised of legal detention in places authorized by law for their reception.

The insomnia of maniacal patients is one of the most distressing symptoms to be overcome; it sometimes persists for weeks and months, but my observation is that this need not create alarm, for the endurance of these patients is astonishing, and death from this cause but seldom occurs. In acute mania I believe insomnia is due to nervous irritability, or strong excitement of the feelings from delusions and hallucinations.

Simple melancholia, the basis being psychical anguish or depression manifesting itself on all occasions and dominating the life of the individual, does not materially differ in its intensity from emotional depression in health resulting from sufficiently profound grief or other cause. It is after all only a modified exaggeration of a mood, but it affects all cerebration; through its influence the whole outside world is hung in black, and every perception thereof is painful. During all this time, however, there may not be total loss of reasoning power; the patient fails to take interest in things about him, not because he is incapable of understanding the problems of life, but because nothing but himself is of interest or occupies his thoughts; all other things appear disgusting, and the mere effort to drag himself, as it were, from his own feelings gives him great pain. The patient is greatly depressed and cares for nothing, with total apathetic lack of energy, so characteristic of the disease. I have observed patients

who sat all day long in a chair, quiet, with hands folded, seemingly thinking of nothing, with an expression of perfect indifference and apathy in their countenances. Such patients often remark that they care for nobody, and that they have no friends, etc.

Prognosis.—The prognosis will largely depend upon the individual case and the special causes of the trouble. In many cases the prognosis is favorable, provided the family and physician recognize the true nature of the disease, and the importance of not leaving the patient alone, lest he commit suicide. If the melancholiac has no neurotic hereditary tendencies, if the attack is of recent origin, for instance following nervous exhaustion, and if the patient's coöperation in the proper course of treatment can be secured, the prognosis is quite favorable. In the so-called inherited variety of melancholia the prognosis is not so favorable.

Treatment.—While proper feeding is of the utmost importance, it is not advisable to at once force nourishment into the stomach; but food should be presented regularly, and the physician should insist that it be taken. A good plan is to leave food within reach of the patient, as he may be tempted to partake of it when not observed. Although many of these patients may not respond to inquiries or converse, and look upon the physician and the nurse with silent suspicion, it is important that at every convenient opportunity the physician assure the patient that the food offered him is free from drugs or medicines. The majority of melancholiacs which have come under my observation have strenuously objected to the taking of medicine.

Every case must be treated according to the individual indications. If the patient suffers from malaria, treat it; if early stage of tuberculosis, it should be treated heroically; remove the patient from everything with which he is familiar. It is important to ascertain early the normal weight of the patient, and cause it to be taken frequently. Microscopical examinations of the blood and urine should be made from time to time. If the patient be a female, carefully examine the genital apparatus; if there be present leucorrhea, pruritus vulvæ, or other local disease, proper treatment should be immediately instituted. I have seen two women who were raving maniacs due to pruritus. I wish to impress upon you the importance of correcting constipation; if this be present the desire for food will be decreased and assimilation retarded. If the patient is anemic, iron, strychnine, and arsenic are indicated; if sleepless, give sulphonal, bromidia, and papain. Hyoscine is especially useful in the insomnia of insanity attended with much motor disturbance, over which it exercises a marked control. As to the dose, I begin with 1/150 grain, which may

be increased to 1/45 grain, not over two doses to be given in twenty-four hours. Sulphonal is best administered in milk. Menstruation is often suspended in melancholic patients; it will return when health is restored, and in this class of cases (young females) good results are usually obtained.

Another important thing is to have these patients arise from their beds early in the morning and take moderate walks. The bowels must be properly regulated and should move once or twice a day. All medicines should if possible be administered in liquid form, not hypodermically if it can be avoided.

I am aware of no routine method of successful treatment. I have always found in these patients a defective nutrition of the brain, and "brain food" is therefore indicated. We should not give medicines which cause nausea. I do not believe we should administer much bromide of potassium in these cases, as this drug in my opinion depresses and emaciates.

Cod-liver oil, syrup of the iodide of iron, arsenic, strychnine, pepsin—these are useful drugs.

PORRO-CAESARIAN SECTION NECESSITATED BY MALIGNANT DISEASE OF THE UTERUS.*

BY R. C. MC CHORD, M.D., LEBANON, KENTUCKY.

On January 9, 1903, Mrs. D—— was sent to my hospital by Drs. Saunders and Atkinson, of Campbellsville, Kentucky, with the history that they had been called to see her in labor twelve hours previously; that they believed, on account of an abnormal growth in and around the uterus, it would be impossible for the woman to give birth to or be delivered of her child, which was supposed to be about term.

The patient was therefore placed on a cot in a baggage car and transported a distance of eighteen miles to my hospital in Lebanon. On arrival she was greatly exhausted from having been in labor many hours. The labor pains had been controlled to a limited extent by the administration of morphine, given with the view of holding them back until she could reach the hospital. The trip on the train added little to the exhaustion or discomfort.

I found the patient about thirty-four years of age, the mother of several children; she was very much emaciated, and had been sick, as she expressed it, "nine long months"—the whole period of uterogestation; she had never consulted either of the physicians

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mentioned until they were called to attend her in labor; no effort had been made at delivery because it was found impracticable.

Physical examination revealed a hard, nodular growth in the abdomen connected with the left side of the uterus; the whole pelvis was blocked with tumors evidently of similar character; the uterus was immovably fixed; movements of the child and fetal heart sounds were feeble; the mouth of the cervix was with difficulty located high up underneath the symphysis, owing to a mass in the posterior part of the pelvis, and was dilated to about the size of a half-dollar. I was unable to make out the presentation.

After careful investigation I fully concurred in the opinion of Drs. Saunders and Atkinson, with whom I had communicated over the telephone, that delivery in the normal way was impossible, and the only way of saving the life of the child and also that of the mother was to do a Cæsarian section; and I also believed it advisable to extirpate the uterus.

During the night the pains were quieted in some degree by the administration of morphine; the patient was nourished and stimulated as well as possible, and the next morning she seemed in better condition. She was carefully prepared for operation, and at 10.30 A.M. the abdomen was opened, Drs. Saunders and Atkinson and a number of other physicians being present.

Upon opening the abdomen a peculiar condition of affairs was encountered. The omentum was filled with nodules, spread over and adherent to a mass which was about the size of a large fist, resembling a popcorn ball, occupying the region of the left ovary, the left tube, and upper part of the broad ligament. Nothing was recognizable about the uterus except its anterior surface; the right tube and ovary appeared to be normal. The uterus was fixed in the abdomen by adhesions, and though I had not anticipated using any constriction about the cervix to control hemorrhage, had I intended to do so it would have been impossible.

Immediately after the abdomen had been opened my assistant surrounded the incision with gauze and pressed the abdominal wall in close contact with the uterus to prevent entrance of the uterine contents into the abdominal cavity. The placental attachment was in the center of the fundus, to the right of the median line, and my incision into the uterus was made to the left of the median line, thus avoiding the placenta.

The incision was made quickly, and when my hand was introduced into the uterine cavity the child and placenta popped out through the incision like a cork from under water. The cord was clamped and cut, and the child handed to an assistant for resuscitation. To my great delight I was soon informed that the child

was all right. The uterus contracted promptly, and there was very little hemorrhage except that which came from the placenta.

My task thus far had been easy, but I was now confronted with the problem what to do with the uterus. To stitch up the wound in the uterus and close the abdomen would have been the easiest way out of the dilemma, but it looked a little cowardly to let the organ remain, malignantly diseased as it was, and leave the woman to a certain fate, without making an effort to at least prolong her life. There was no time to reason why.

In view of the fact that I had determined before beginning the operation to do a hysterectomy, I decided to attempt to extirpate the uterus, though believing that sooner or later death would be the inevitable result. I tied off and cut away that portion of the omentum which was nodular; the ovarian arteries were then isolated and ligated well toward the upper and outer extremity of the broad ligaments. This was easily accomplished on the right side, but on the left side, where the mass was located, it was more difficult; the posterior portion of the uterus and the nodular mass on the left side were firmly adherent to all adjacent structures, and the anatomical relations were almost unrecognizable. By keeping close to the uterus I was able, with my fingers and scissors, to dissect down to the round ligaments, which I tied off; an incision was then made transversely across the anterior surface of the uterus at the junction of the bladder peritoneum, which was freed from the uterus by pushing it down with gauze between the round ligaments; the latter were then clamped near the uterus and severed between the ligatures (previously applied) and the clamps. Still working close to the uterus behind I was able to enucleate it out of the nodular mass in the pelvis and ligate the uterine artery on the left side; the cervix was then amputated near the vaginal junction; the right uterine artery was clamped and ligated, and the uterus was then removed.

Though little blood had been lost during the procedure, I was at this juncture warned by the anesthetist that the patient did not have much pulse. During enucleation normal salt solution was introduced under the skin, and this was continued until the operation was completed. Fearing the patient would die on the table, I did not take time to close the cervical wound and stitch the peritoneal surfaces together, as I had contemplated, but contented myself with wiping out the abdomen hurriedly and filling the cavity with hot saline solution, which was left in, closing the abdomen with through-and-through silkworm-gut sutures.

The patient was pulseless when removed from the operating-room, but by subcutaneous infusion of saline solution, hypoder-

mic injections, etc., she was revived and continued to live in comparative comfort, with practically no elevation of temperature, and with other functions normal, until the morning of January 13, when peritonitis developed, and she died that night.

The child, though feeble, progressed satisfactorily until the second day, when during the nurse's absence from the room for five minutes the ligature on the umbilical cord slipped, and on her return she found the child in a pool of blood, and death resulted in a few minutes. The cord was quite edematous when the child was delivered, and a competent physician tied it. I think its detachment was due to the cord shrinking.

I have only one criticism to make of my management of this case, and that is I should not have extirpated the uterus, but should have closed it and the abdomen and left the patient to her fate to die of the malignant disease. I will say, however, in defense of the course I pursued, that if the patient's strength had held out sufficiently long for me to complete the operation I had contemplated, viz., to close the cervical stump, stitch the anterior and posterior surfaces of the peritoneum over the raw surfaces, and make a careful toilet of the peritoneum, she might have recovered from the immediate operation, to die later of the malignant disease.

Marguerite Boyenval, of Thenelles, roused from her long sleep on May 26, five days over twenty years since she sank into her trance. She has been under the medical care of Dr. Charlier, mayor of Origny-Sainte-Benoite, and he found that she was becoming tuberculous, and attributes her waking to the inroads of the disease. Her jaws were clenched, and her case has been described as the "summum of the diathese d'contracute," with profound lethargy, mental inertia, and physical insensibility. Her mother fed her during these twenty years by peptone in rectal enemata, and through the gap of a broken tooth. A few months ago signs of returning sensibility were apparent. An abscess had to be opened, and the muscular contraction gradually subsided and consciousness returned. She was able to answer yes or no to questions, and exclaimed that the physician was hurting her when he took her arm, and asked for her grandfather who has long been dead. She was emaciated to a skeleton, and her weakness was so extreme that the physician advised absolute quiet; and she thus passed away. The *Gazette Médicale de Paris* of June 6 gives further details, describing especially her abundant blonde hair. The autopsy had not been made at the time.—*Journal of the American Medical Association.*

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EDITORIAL ARTICLES.

NEW NOTIONS OF THE UNIVERSE.

It is difficult for those untrained in the comprehension of chemical and physical problems to appreciate fully the significance of recent discoveries connected with radiant matter. These discoveries are of a kind likely to subvert many established notions of the nature and constitution of matter, and they will therefore be far-reaching in their effect. Their influence in medicine has already been made manifest in the widely prevalent ray-treatment of disease, but this will probably sink into minor importance when the revolutionizing effect of the new conceptions of the atom come to be digested and the secondary adjustment of preconceived theory comes to be effected.

These epoch-making discoveries may be said to have been commenced by Crookes. They have been added to recently by Curie, the French physicist, and Thompson, Rutherford, and Lodge, English physicists. Their investigations have carried them into an entirely unknown region in physics and chemistry, where all analogies fail, and all accepted notions of the ultimate nature of things offer little or no assistance.

A study of the radioactive force of certain new elements—radium, thorium and uranium—has shown three kinds of rays to be emitted, one of which consists of radially projected atoms of matter which are thrown into space at the stupendous speed of 30,000 miles a second. These particles are more massive than negative electrons, which are also thrown off at a similar speed and have been known hitherto as radiant matter. These former particles are positively charged, and in speed move faster than the fastest star, and are indeed the most rapid moving matter known.

This property of radioactivity is giving definiteness to a most important conception of matter. Years ago Mendeleeff stated the terms of what he called the periodic law of the elements, in which the idea was included that multiple proportions of identical matter produced elements of differing physical quality. The phenomena of radium seem to indicate that corpuscles fly off from the atom, as meteors may leave a solar system. Every experiment so far made goes to show that new elements are being formed out of the original elements, that this process goes on without reference to any interference by ordinary physical or chemical force.

The transmutation of the elements has long been one of the dreams of science. The alchemist who devoted his days and nights to discovering the transmutation of metals felt he was nearer to the truth than perhaps any physicist has felt himself since those times. It now seems to be conclusively proved that the transmutation of elements is proceeding spontaneously throughout the universe. It is possible that science may one day be able to control or influence this process. When this is done man would acquire a command over his surroundings which is beyond the capacity of any human being with his present understanding to imagine or conceive. The problems of health, and even the problems of life itself, might be so comprehended that transmutation into new forms of existence might be entirely an affair of the human will. To begin to contemplate all the possibilities of this power once under human management would induce an intellectual vertigo which if not carefully controlled might quickly involve the thinker in unsound methods of reasoning.

EDITORIAL NOTES.

Spurious Champagnes.

While it has been long known that the adulteration of food products has been carried into wines, it has been generally supposed that champagnes at least were pure. Quite recently the *Lancet* has been carrying on a series of investigations to test the purity of various brands of champagne on the market. The revelations show that the following formulæ are used by unscrupulous dealers in the making of artificial champagnes:

"Champagne liqueur: Boil eight and three-quarter pounds of the finest loaf-sugar with one gallon of water; add gradually while the water is boiling half a gallon of alcohol of 90 per cent;

and then filter the mixture. The above liqueur is added to all the following compounds (we reproduce them literally to show the disgraceful use made of the names of certain well known champagne firms): Chandon et Moet (green and bronze seal): Mix the champagne liqueur with seven-and-a-half gallons of white wine, one bottle of cognac, and four drops of sulfuric ether dissolved in cognac. Heidsieck et Cie (sealed with tin-foil): Mix the champagne liqueur with seven-and-a-half gallons of white wine and three-quarters of a pint of cognac. The next one is very interesting. Lemberg Geldermann et Deittz (sealed with tin-foil): Mix double the quantity of champagne liqueur with seven-and-a-half gallons of white wine and three-quarters of a pint of cognac in which two roots of celery carefully cleansed have been previously digested for four hours."

Racial Resistance.

In the construction of the railroad at Madagascar, the employment of labor from India, from China, and from Africa gave an opportunity for testing racial resistance to climatic diseases. The Indians represented the weakest race and were most contaminated by tuberculosis, alcoholism, and syphilis. They were not habituated to hard labor. The Chinese were much subject to skin disease, and soon passed into marasmic conditions. Both Indians and Chinese were the prey of paludism. The first had a mortality of 432 per 1000, and the second 769 per 1000. The Africans furnished a large contribution to the deaths from malaria, and their mortality was 79 per cent. Europeans from the age of twenty to twenty-five of sound constitution resist satisfactorily the climatic conditions of Madagascar, the invalided being mostly alcoholics, or those excessive in venery. Madagascar would, however, scarcely seem likely to become a popular health resort just at present.

Diphtheria Contracted from Old Clothing.

The necessity for thorough and careful disinfection of houses and clothing after infectious diseases is shown by an incident which recently occurred in a small Ohio town. A child died of diphtheria, and its mother packed its clothing away in a chest. The mother died fifteen years afterward. Recently the granddaughter opened and handled the contents of the chest, and was immediately taken ill with diphtheria, although there did not exist at the time a single case of the disease in the village.

ITEMS AND NOTES.

THE plague in Chili is spreading.

BARNES MEDICAL COLLEGE, St. Louis, has established pharmaceutical and dental departments.

SIR FREDERICK TREVES will retire from active practice, it is announced in the English newspapers.

THE second annual congress of Greek-speaking members of the profession was held at Athens, May 17 to 23.

BECAUSE of the wetness of the season, there is an enormous increase of mosquitoes along the North Atlantic coast.

THE Swedish Medical Association has lately been reorganized on the same plan as the American Medical Association.

BY the will of the late Mr. James Cooper, of Montreal, the medical faculty of McGill University receives $60,000.

MISS GEORGIS WRIGHT, of Buffalo, has been appointed mercantile health inspector of that city at a salary of $500 per year.

LATE information from Honolulu states that dengue fever continues to prevail in Honolulu, and in other districts of the islands.

ISOLATED cases of bubonic plague have occurred at Valparaiso and other towns in Chili. The authorities are taking the strictest precautions.

AN exchange states that according to statistics just published in London there are 352 women physicians in all England. There are 548 in Chicago.

BY an ordinance passed at a meeting of the Board of Supervisors of Public Works in San Francisco on June 22, no hospital hereafter to be erected shall exceed sixty feet in height or contain more than four stories.

THE United States Minister at Santiago de Chile has sent a cable despatch to the State Department reporting a serious state of affairs in Chile in consequence of the rapid progress of bubonic plague in nearly all the seaport towns.

The Sixth International Congress of Psychology, which was to have met in Rome in the autumn of 1904, will be postponed to the spring of 1905 to avoid conflict with the Sixth International Congress of Physiology, which meets at Brussels in the autumn of 1904.

It is reported by a contemporary that in two cases of heat-stroke in Cincinnati twelve ounces of blood was withdrawn, and replaced by an equal amount of physiological salt solution, with excellent results. Temperature was reduced, convulsions ceased, and the patients fell into refreshing sleep within an hour.

The late Prof. Carl Gerhardt, of Berlin, would have been seventy years old if he had lived till May 5. On that date a memorial ceremony was held at the Berlin Charité, addressed by Professor Martius, of Rostock. A portrait of Gerhardt was presented by his assistants, to be placed in the medical clinic formerly under his charge.—*Exchange.*

The proposed reorganization of Rush Medical College as an integral part of the University of Chicago is practically assured. At the Rush convocation exercises, held in Chicago on June 27, Dr. Frank Billings said that the $1,000,000 promised by the Rush authorities would be raised by the time appointed, July 1. On July 1 it was announced that the amount had been raised.

By the will of Spencer Morris, formerly professor of medical jurisprudence and toxicology, the sum of $12,500 is bequeathed to the Medico-Chirurgical College of Philadelphia, the income from which is to be awarded annually to the member of the graduating class who receives the highest general average at the final examinations for the degree of doctor of medicine.—*Philadelphia Medical Record.*

One of the oldest practicing physicians in the West, Dr. Robert Boal, died at his home in Lacon, Ill., on June 12, at the age of ninety-six. Dr. Boal was prominent in the Illinois legislature long before the civil war and was a stanch supporter of Lincoln. He was one of the organizers of the Illinois Medical Society seventy years ago, and was an intimate friend of Lincoln, Douglas, Baker, and Hardin, and wielded a large power in shaping the affairs of the State of Illinois in the early days.

The recently issued annual report of the School of Medicine for Women, the *London Telegraph* notes, records the longest list ever issued of public appointments conferred upon female prac-

titioners, of whom there are said to be ninety in London alone. In addition to those made at the Royal Free Hospital—the first general hospital to appoint women to its medical staff—and the new Hospital for Women, which is entirely officered by the sex, there are a number of noteworthy positions to which women have been appointed for the first time.

It is reported, says the *Medical Record*, that the Portuguese government has received a proposal from Prince Francis Henry of Hohenlohe for the formation of a large company for the exclusive establishment and exploitation of sanatoria for the cure of consumption in Madeira. The proposal guarantees that one-third of the receipts shall be paid to the State, and that a forfeit of $100,000 shall be deposited with the Portuguese government. Two sanatoria are to be built within the space of two years.

Dr. Wiley, of Washington, D. C., who has for some time past conducted experiments in the administration of borax in the preparation of food, with a view to determining its qualities as a harmless or deleterious substance in diet or in the preservation of food, has, according to the *New York Medical Journal*, closed his laboratory and free boarding-house for the summer, one reason assigned being that the proximity of the scientific kitchen to the laboratory is likely to render the temperature of the latter more torrid than desirable. Dr. Wiley expects to resume his experiments on October 1.

There is rejoicing in Switzerland over the realization of the long cherished hope of united organization of the medical profession. The general meeting held at Lausanne, June 12 to 14, was attended by 350 members and delegates from all parts of the country. Besides the usual excursions and clinics by prominent visitors, a number of scientific articles were read, among them one by Kocker on "Treatment of Goitre;" by His on "Articular Rheumatism;" and by Bard on the "Importance of Laboratory Research for Practical Medicine."—*Journal of the American Medical Association.*

Dr. Garnault's experiments on himself to refute Koch's assertion in regard to the non-identity of human and bovine tuberculosis have resulted negatively, as we have previously reported. No general infection has followed, and the local tubercles on the arm soon healed. No tubercle bacilli nor caseous tissue were found in them. Garnault is an athlete, and possibly the experiments might have resulted differently on a less perfect

physique; but as it is our German exchanges either ignore his experience altogether or refer to it as resulting in a confirmation of Koch's statements, instead of a refutation.—*Journal of the American Medical Association.*

In order to evade the strict regulations of the Marine Hospital Service, the Gulf Transit Company, which is an auxiliary to the Louisville and Nashville, has equipped its three steamers of the Tampico coal line with complete fumigating plants, and the vessels on their return from Tampico are no longer detained at the quarantine station. The company has arranged with the surgeons of the service at Tampico to fumigate the vessels in the streams there before their departure, and as it usually requires about five days in which to make the passage the steamers are allowed pratique. This method results in a saving of about $2000 for every vessel on each trip.—*American Medicine.*

A major and surgeon of the army stationed in the Philippines writes that recently, when the chief nurse of a small base hospital in Southern Luzon was sent away, there was a great struggle among the five nurses remaining for the vacant position, which meant a distinct increase in pay. Each one of the five came to the office of the surgeon in charge to show cause why she should be appointed chief nurse, and why none of the others were entitled to that distinction. The young Solomon in charge was "up against it," but gave the following decision: "Each one of you must write on a piece of paper her exact age, and send it sealed to me. The oldest woman will be made chief nurse." There is still a vacancy as chief nurse in a small base hospital in Southern Luzon.

According to the police of Philadelphia it is not an unusual thing for boys to become intoxicated by inhaling the fumes from kerosene. The vicinity where these debauches have been observed is usually in the neighborhood of the railroad yards where the empty oil cars are stationed. The method of obtaining the fumes is for the boys to climb upon the tank car, place their noses over the manhole, and thus inhale the fumes. The effects produced are similar to those caused by alcohol: first a feeling of exhilaration, then a period of stupor, and following is the period of deep sleep. It is stated that in several instances boys drunk from these fumes have been taken to hospitals in the vicinity. From the meager amount of observation in such cases it is believed that the effects on the system are similar to those produced by alcohol. —*American Medical Journal.*

NEW PUBLICATIONS.

FIRST PRINCIPLES OF OTOLOGY.

This little book, written solely for the use of students, contains all the material which may be demanded by the most exacting undergraduate, whose aim is simply to acquire a knowledge of the first principles of this branch of surgery, without having to wade through larger treatises on otology written for more advanced works.

The unpretentious but excellent illustrations add greatly to the value of the work, which has been carefully revised for this edition, and fulfils its object of being practical, clear, and comprehensive, while unencumbered with unnecessary matter.

First Principles of Otology. A Text-book for Medical Students. By Albert H. Buck, M.D., New York City, Clinical Professor of the Diseases of the Ear, College of Physicians and Surgeons, Medical Department of Columbian University, New York; Consulting Surgeon, New York Eye and Ear Infirmary and the Presbyterian Hospital. Second Edition. New York: William Wood & Co., 1903.

PEDIATRICS—ORTHOPEDIC SURGERY.

The June number of this series of year-books, consisting of pediatrics and orthopedic surgery, has been issued under the joint editorship of Isaac A. Abt and John Ridlon. The volume consists of a concise résumé of these subjects, and has been done in a careful and thorough manner. It will prove a valuable addition to the working library of the general practitioner. The editors have put into this volume the results of work done by the foremost specialists in pediatrics and orthopedic surgery of the country.

The Practical Medicine Series of Year-books. Vol. VIII: Pediatrics—Orthopedic Surgery. Edited by I. A. Abt and John Ridlon. Chicago: The Year-Book Publishers.

PLAIN HINTS FOR BUSY MOTHERS.

This little handbook, as its name implies, is intended to aid mothers whose means are limited and who must care for their own babes, at the same time attending to their house work. It is written in such a plain and simple manner that no one could fail to understand its directions. It is full of common-sense advice as to general health, clothing, food, bathing, fresh air, etc. Its pages on "Don'ts" are specially practical and helpful.

Plain Hints for Busy Mothers. By Marianna Wheeler, Superintendent of the Babies' Hospital, New York, since 1891, and author of The Baby. With Illustrations in Outline. Substantially Bound in Flexible Leatherette. 35 cents. New York: E. B. Treat & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Dangers of the Trendelenburg Position.

Professor Kraske *(Lancet,* July 11, 1903) at the recent meeting of the Berlin Surgical Congress, said that although the Trendelenburg position is attended by manifold advantages under numerous conditions, it might nevertheless occasionally lead to serious accidents. Instances of paresis of the peroneal muscles and emphysema of the abdominal walls have already been recorded. These are only temporary lesions, and their after-effects are of little if any consequence, but the interference with the circulation which attends the production of anesthesia in the Trendelenburg position is of much greater importance. In two cases of myocarditis the administration of ether as an anesthetic led to a fatal issue, which in Professor Kraske's opinion was due to acute dilatation of the heart, the result of increased blood-pressure caused by the Trendelenburg position. In a third case the patient suffered from ileus for four days, but recovered on the fifth day. In a fourth case, in which the symptoms of ileus became very alarming, he reopened the abdominal wound and found that the omentum was doubled up and lying above the liver, the effect being to cause obstruction of the transverse colon. He freed the omentum, but the patient died. Similar observations had been made by Professor Schauta, of Vienna, who found that after the intestine had undergone displacement in consequence of the employment of the Trendelenburg position it did not spontaneously return to its normal place when the patient lay horizontally; he therefore recommends that the surgeon before closing the abdominal wound should correct any displacement of the intestines there might be. Professor Kraske is of opinion that the hematemesis observed after laparotomy is due to distention of the gastric veins.

Professor Trendelenburg said that he doubted whether the cardiac embarrassment in the case of myocarditis mentioned by Professor Kraske was really caused by the elevation of the patient's pelvis and lower extremities. Such patients are not good subjects for the inhalation of an anesthetic in whatever position they might be. With very corpulent patients he does not employ elevation of the pelvis for more than five or ten minutes at a time.

The Vertical Overlapping Operation for the Cure of Umbilical Hernia.

Wm. J. Mayo *(Journal of the American Medical Association,* July 25, 1903) gives the following steps of his operation:

Transverse elliptical incisions are made surrounding the umbilicus and hernia; these are deepened to the base of the hernial protrusion.

The surfaces of the aponeurotic structure are carefully cleared two and a half to three inches in all directions from the neck of the sac.

The fibrous and peritoneal coverings of the hernia are divided in a circular manner at the neck, exposing its contents. If intestinal viscera are present the adhesions are separated and restitution made. The contained omentum is ligated and removed with the entire sac of the hernia, and without tedious dissections of the adherent portion of omentum.

An incision is made through the aponeurotic and peritoneal structures of the ring extending one inch or less transversely to each side, and the peritoneum is separated from the under surface of the upper of the two flaps thus formed.

Beginning from two to two and one-half inches above the margin of the upper flap, three to four mattress sutures of silk or other permanent material are introduced, the loop firmly grasping the upper margin of the lower flap; sufficient traction is made on these sutures to enable peritoneal approximation with running suture of catgut. The mattress sutures are then drawn into position, sliding the entire lower flap into the pocket previously formed between the aponeurosis and the peritoneum above.

The free margin of the upper flap is fixed by catgut sutures to the surface of the aponeurosis below, and the superficial incision closed in the usual manner. In the larger hernia the incision through the fibrous coverings of the sac may be made somewhat above the base, thereby increasing the amount of tissue to be used in the overlapping process.

Gastric Ulcer and its Surgery.

In regard to the surgical relief of gastric ulcer, A. Carliss (*Lancet,* July 18, 1903) says that pyloroplasty is a very simple procedure and should be very successful as an operation. A death-rate of 10 per cent had been associated with it, but there is no reason why it should be so high. The immediate results of this

procedure are often excellent, but there is a certain tendency for the orifice to recontract, the percentage of which cannot at present be estimated. Well marked limitations, however, exist to the utility of this operation. In the first place it can only be undertaken in the absence of adhesions; secondly, it is very difficult or almost impossible to open out and to suture up a very thick and indurated pylorus; thirdly, if the stomach is much dilated and sags downward the contents are likely to stagnate in the pouch thus formed, and no improvement will follow. Again, whenever the motor power of the stomach is diminished pyloroplasty is of very little use. Finally, it must not be forgotten that occasionally duodenal ulcers coexist with the gastric variety, and cicatrization of these may lead to duodenal stenosis, when pyloroplasty would be useless.

Pylorectomy is sometimes valuable in the removal of chronic ulcers involving the pylorus which have become hard and indurated. Formerly such a procedure was almost unjustifiable, owing to the death-rate, but at the present time, granting that there are no serious adhesions, there is no reason why it should not be performed, and with a high percentage of success.

Gastroplication is sometimes useful as an adjuvant to one or other of these proceedings. It consists in folding up the stomach wall and fixing it by a series of stitches so as to obliterate the pouch which always tends to form when pyloric obstruction exists.

Where, however, these procedures directed toward the pylorus itself are for one reason or another contraindicated, gastroenterostomy must be relied on, and the result will probably be most beneficial.

Surgical Hints.

The July number of the *International Journal of Surgery* contains the following surgical hints:

A good blunt retractor can be made by bending over the handle of a spoon. For a sharp retractor bend the tines of a fork at right angles.

In the case of an intoxicated person who has received a severe injury, it is always best to empty the stomach at once by means of the stomach-tube and funnel.

Never give an emetic to cause the expulsion of a foreign body unless it is known that the latter is of such a size and form that it can easily repass through the esophagus.

In every severe injury of the hand or fingers perfect rest is

desirable, and it is always of advantage to place the hand on a splint, so that the patient will be unable to use the fingers.

It is never wise to anesthetize a patient in the presence of many people. It renders them more agitated and nervous. It is preferable to anesthetize in an adjoining room, or to cause all but the anesthetist and one assistant to leave the room until the patient is thoroughly under the influence of the anesthetic.

In giving ether it is a mistake, after anesthesia is complete, to continue it until it becomes very profound, and then leave it off until the patient shows signs of returning consciousness. Allowing the patient one breath of pure air to every four or five of ether will commonly keep him in excellent condition, while the anesthesia is effective and safe.

Cancer of the Uterus: Its Cause and Cure.

J. B. Perkins *(International Journal of Surgery,* July, 1903) makes the following conclusions:

1. That cancer of all parts of the body appears to be more prevalent than it was a few years ago.

2. That cancer in the beginning is purely a local disease, and may at that time be completely cured by operation.

3. That other forms of treatment are not curative, and should be used only in inoperable cases.

4. That cancer of the cervix occurs much more frequently where lacerations exist, small tears being apparently as apt to produce the trouble as more extensive ones.

5. That in every operation for lacerated cervix the tissues removed should be subjected to a histological examination.

6. That in every case where there is the slightest suspicion of cancer a section should be taken and subjected to examinations.

7. That occasionally from curettings of the uterus a diagnosis of cancer may be made.

8. That heredity does not appear to play any very important part in the etiology of cancer.

9. That the family physician is the one who, above all others, can do most to lessen the mortality of all kinds, and especially from cancer occurring in the uterus.

Tumefactions of the Climacteric Breast.

Theo. A. McGraw *(American Medicine,* July 25, 1903) says that no breast ought to be adjudged cancerous without the most

thorough examination by all possible methods; but when the surgeon, using his best judgment after full investigation, has come to the conclusion that he has to deal with a tumor of dangerous tendencies, he should then operate on it so thoroughly as to destroy if possible every secondary growth, whether in fascia or muscle, skin or gland. He should assume that the skin above it, the fascia and muscle below, and all of the neighboring lymphatic vessels and glands, are already infected, and should make the operation wide enough and deep enough to take in all of the suspected territory.

We cannot as yet say that we can in this way cure all patients with the disease, nor even a majority of them, but we may truthfully claim to have had a success in a very large minority, which our predecessors in surgery never achieved.

The writer says he has many patients who are living without recurrences after three, five, and ten years, and feels justified therefore, in spite of many discouraging failures, in recommending the operation as the only treatment which as yet has shown a fair measure of success.

Above all things, says McGraw, we should try to keep our patients out of the hands of the charlatans, who inflict upon them indescribable tortures which in the very nature of things cannot possibly be of service.

Cardiolysis.

Dr. Brauer, at the recent meeting of the German Surgical Congress (*Lancet,* July 18, 1903), gave an account of the surgical procedures undertaken for the relief of chronic mediastinopericarditis, a condition in which the exterior of the pericardium becomes adherent to the mediastinal and thoracic walls, with the result that the function of the heart is seriously interfered with. Medical treatment being of no avail, Dr. Brauer performed an operation which has been called cardiolysis, and which consists in resecting some costal cartilages and a part of the sternum so that the heart will have more freedom of movement. He showed two patients in whom edema, ascites, and some other symptoms of cardiac insufficiency had disappeared since the operation. As the cardiac weakness renders the employment of general anesthesia very hazardous in this condition, Dr. Brauer recommends that the surgeon should operate very rapidly, that he should refrain from the difficult task of loosening the adhesions, and that he should confine himself to the removal of the above mentioned structures.

Mediastinopericarditis seems not to be so rare as had been supposed. Since attention has been directed to it four cases have been discovered by the physician of the Heidelberg medical clinic; three of them were operated on successfully, and one died from influenza.

MEDICINE.

Edema of the Glottis.

J. C. Gittings (*New York Medical Journal,* July 25, 1903) says simple edema of the larynx usually occurs in cachectic diseases, especially of the heart and kidneys. In these there may be no apparent exciting cause, and the inflammatory symptoms are conspicuous by their absence.

Inflammatory edema of the larynx results from contiguity to other inflamed structures; as a local complication of the acute infections of erysipelas, variola, measles, scarlatina, influenza, etc.; or as a result of a severe grade of inflammation in simple acute laryngitis. Bacteriological investigation will probably find that a streptococcus is the most frequent exciting cause.

Traumatism to the laryngeal structures may result in edema, depending on the degree of "insult" to the tissues or to a possible predisposition. Among rare causes of edema of the larynx are angioneurotic disorders and the blood dyscrasiæ, such as scurvy, purpura, etc.

The diagnosis rests on the evidence of palpation and, if possible, visual examination, as well as on the signs of laryngeal obstruction. Membranous laryngitis cannot always be at once excluded.

Prognosis is unfavorable in all cases occurring in the course of chronic cachectic diseases, and in severe types of the acute infectious diseases. In no case can it be other than guardedly favorable. Treatment by intubation rarely affords relief unless the obstruction is infraglottic. Tracheotomy is absolutely demanded in extreme cases. The continuous inhalation of medicated steam is always to be employed; scarification and external depletion by leeches may be tried; cold and heat should be used externally and internally—cold as a prophylactic and heat as a stimulant and absorbent. General stimulating and supportive measures are necessary in all cases.

With the occurrence of edema of the larnyx the time of election for the use of antistreptococcic serum has probably passed.

As the infection is usually a mixed one, serum therapy does not at the present time offer much prospect of relief, and its use must be empirical, unless there is opportunity for bacteriological diagnosis from cover-glass preparations.

Cirrhosis of the Stomach and Colon.

J. B. Cleland *(British Medical Journal,* July 18, 1903) records a case of this extremely rare condition. The patient, a man aged thirty-nine, had had an attack of indigestion, lasting a week, six months before admission; otherwise no previous illness. When taken into hospital he had been suffering from diarrhea and vomiting for about two months; for the last ten days he had noticed a tender and somewhat painful lump in the right side of the abdomen. No blood had been passed by the rectum, but the patient had lost nearly 28 pounds in weight during the last six months. On admission he was found to vomit from ten to fifteen minutes after food, and to have a rounded, ill-defined mass to the right of the umbilicus. An exploratory laparotomy was performed. The mass was found to be associated with the colon, was considered to be malignant, and the wound was closed. Death ensued five days later. Post mortem the principal changes found were in the stomach and colon, in each of which there was a thick cartilaginous-looking layer immediately beneath the mucous membrane. This layer consisted almost exclusively of fibrous tissue, which was massed especially round the vessels. The circular layer of the muscles was cut up by bands of fibrous tissue into lobes and lobules like those of a cirrhotic liver. The masses of fibrous tissue were in places separated by clusters of small young cells surrounding small vessels. The mucous membrane was nowhere ulcerated, though its defective blood-supply had led in places to an increase of small round cells. The author considers this case to have been one of fibrosis, started by the presence of a toxin circulating within the blood-vessels.

A Clinical and Bacteriological Study of Dysentery in which "Dysentery Bacilli" were Found.

W. H. Park and E. K. Dunham *(Medical Review of Reviews,* August, 1903) say that at least two distinct varieties of bacilli are found in the intestines of those suffering from dysentery and colitis, which have not as yet been met with in other conditions.

These two varieties differ from one another in certain cultural characteristics (indol formation and mannit fermentation), and also in their agglutination reaction. Different cultures obtained from widely separated places, though agreeing in the cultural tests so far tried, and resembling each other greatly in their agglutinating reactions with most sera, yet according to results obtained by the authors differ from each other when tried with various normal animal sera.

Though Martini and Lentz are right in their statement that the Shiga type differs from Flexner's Manila and Baltimore type in cultural and agglutination reaction, yet they appear to the writers to be wholly wrong in concluding, upon our present information, that one type of organism is any more a factor in dysentery than the other. Indeed, bacilli such as those obtained by Deyecke from dysentery in Constantinople which approached the colon type in cultural characteristics cannot as yet be overlooked.

It seems to the authors that it is extremely probable that Shiga, if he carries his cultural and agglutination tests as far as is necessary to differentiate the different varieties, will find that in Japan, as well as in America and elsewhere, not one but several varieties are present in the intestines of different and perhaps the same patients.

The use of more accurate agglutination tests along with additional culture media has brought to light the fact that in different epidemics the bacilli found vary so greatly from the culture of Shiga that at present we can hardly determine whether or not they can be gathered together into one single dysentery group.

The Clinical Importance of Albuminuria.

H. H. Schroeder *(Medical Record,* July 18, 1903) says it is impossible to determine whether albuminuria is a premonition of further trouble until the case has been kept under observation for some time.

Transient albuminurias are not of serious import unless they recur too frequently.

Persistent and even cyclic albuminurias should cause anxiety on the part of the attending physician, who should endeavor to ascertain the cause and take measures for the removal thereof.

The earliest indications of Bright's disease will as a rule be found in the urine.

Careful observation of these cases means frequent examina-

tions of twenty-four-hour specimens of urine for the purpose of finding out the daily quantity, the amount of urea, the specific gravity, and the presence of albumin and casts. The blood-vessels and the heart should also receive attention. These observations may have to extend over a period of months or even years.

The most frequent causes of albuminuria are excessive eating, overindulgence in alcoholic drinks, and possibly tobacco, mental and physical stress, and the gouty diathesis.

The mortality among albuminuria cases is great, not only because chronic nephritis is often associated with it or may follow later on, but also on account of poor resistance afforded to other diseases.

The Bactericidal Power of the Human Blood Serum in Disease and Health.

Löwenstein *(Archiv für klin. Medizin,* 1903, Bd. 76) studied the bactericidal power of blood serum derived from the umbilical cord of newly-born infants and from venesections in the adult. He showed that the blood serum of the human adult possesses a marked bactericidal power to typhoid and cholera bacilli, and a weaker one for the anthrax, whilst staphylococci and diphtheria bacilli grow rapidly on it. The serum taken from the umbilical cord in infants possesses the same bactericidal power as that taken from the adult. Diabetic serum loses its bactericidal power for the anthrax. In infectious diseases the bactericidal power of the blood for the infecting germ is completely lost.

A Delicate and Simple Test for Sugar.

Riegler *(Deutsche med. Wochenschrift,* No. 15, 1903) gives the following test: Place one cubic centimeter of urine in a test-tube and add as much oxalic acid phenylhydrazin to cover a knife point and ten cubic centimeters of water; this mixture is boiled over a small flame, continually agitating until completely dissolved. Ten cubic centimeters of a 10-per-cent solution of potassium hydrate is then added, the test-tube closed with a cork and thoroughly shaken. If sugar is present the mixture at once or in one minute turns a reddish-violet color. Sugar in a solution of .05 per cent may be demonstrated. The presence of albumin does not interfere with this reaction.

THERAPEUTICS.

The Treatment of Gastroptosis.

J. Le Conte (*New York Medical Journal*, July 18, 1903) says the indication for treatment may be divided into: (1) Mechanical support for the prolapsed stomach and other viscera; (2) restoration of the lost tone and motor activity to the gastric and abdominal muscles; (3) increased nutrition; (4) treatment of the complication. One of the best forms of mechanical support is an elastic abdominal bandage fitted carefully, so constructed that it exerts its pressure upward and backward on a point midway between the symphysis and navel. The bandage must be held down firmly against the symphysis with perineal straps, otherwise the bandage slips up and fails of its purpose. The use of zinc adhesive plaster strips twelve inches wide, as recommended by Rose, applied to the abdomen so as to serve as a support, commends itself especially in dispensary cases. Where the item of expense is an important one, the plaster can generally be worn between five and six weeks before it is changed. The idea that when a bandage is once worn it becomes a lifelong necessity is fallacious, the patient generally being able to lay it aside in a few months on the return of strength and tone to the ligaments and abdominal walls. The bandage is especially useful in so-called "Landau" cases, where the relaxed and overstretched abdominal muscles allow the abdominal contents to overflow the brim of the pelvis.

Injurious constriction at the waist should be forbidden, and the weight of all skirts transferred to the shoulders by means of a corset waist. Rest in bed for several weeks, as advised by some, is valuable in a severe case bordering on neurasthenia, but ordinarily more is gained by outdoor air and exercise and the avoidance of mental depression caused by enforced confinement to bed.

The patient should be directed to recline with all clothing loosened for at least half an hour after meals.

Therapeutic Suggestions in Diphtheria.

L. Fischer (*Medical News*, July 18, 1903) offers the following suggestions: (1) Give antitoxin at once and give a sufficient dose. In mild cases this will be 1500 units for a child between one and five years, and at least 2000 units for a child between five and ten years. If there is no improvement at the end of twelve

hours a second injection should be given. If there is no improvement at the end of twenty-four hours a third injection should be given. If there is severe toxemia, enlargement of the cervical lymph glands, or evidences of stenosis, the initial dose of antitoxin should be greater, at least 3000 units, and be followed in twelve hours by 1500 units more. (2) Cases in which mixed infection has occurred cannot, as a rule, be successfully treated with antitoxin alone. The streptococcus is the most frequent associated microörganism. (3) Next to antitoxin in importance is a restorative and supporting treatment. No medication equals food. When mouth feeding is difficult or impossible, rectal feeding must be resorted to. The following nutritive enema is suggested: Predigested milk, one ounce; starch water, one ounce; laudanum, one minim. If well borne, this may be repeated every four hours, and the yolk of a raw egg may be added to it. (4) Local cleaning with normal salt solution may do much to reduce the toxemia; the pseudomembrane is at times favorably influenced by creosote vapor, weak sulphurous acid vapor, and by direct applications of one-half strength Lugol's solution. (5) The general measures of the greatest importance are abundance of fresh air; at times oxygen will be found useful. Temperature should be controlled by sponging, by the cold pack, and by flushing the bowel with cold water. (6) Stimulation is advisable from the beginning. Strychnine and alcohol are both well borne by children in even relatively large doses.

Physiological Salt Solution.

Engelman *(Deutsche med. Wochenschrift,* 1903) after a number of experiments and a thorough review of the literature arrives at the conclusion that a 0.9-per-cent solution of sodium chloride is the correct physiological salt solution. He finds that salt solutions of this strength are isotonic—that is, the red blood-corpuscles are not affected by them, their contour not being changed; stronger or weaker solutions produce changes in them, causing them to crenate and gradually dissolving them. It therefore follows that clinically and in the laboratory the 0.9-per-cent solution should be used and not the so-called normal saline solution of 6 per cent, which is incorrect.

Etiology and Treatment of Fall Catarrh.

Dunbar *(Berliner klin. Wochenschrift,* No. 28, 1903) from his examination finds that there is no doubt that in America and

other countries the occurrence of fall catarrh is due to the pollen kernels of the goldenrod and certain varieties of the ragweed plant. The toxins of these bodies are different from the toxins of the Graminee pollen, which is the cause of the hay-fever. Symptoms of irritation caused by the goldenrod pollen were relieved by the use of Graminee pollen antitoxin. The asthma of hay-fever is relieved by spraying the antitoxin into the nose. The author has prepared the antitoxin in powder form and obtains therefrom good results. This antitoxin does not irritate the kidney, and a habit is not formed from its repeated use.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

The Relative Merits of the Toxins and the X-rays in Inoperable Sarcoma.

In a communication to the American Surgical Association, Washington, D. C., May 13, 1903 (reported in the *New York Medical Journal and Philadelphia Medical Journal*, Aug. 8, 1903), Dr. William Coley, of New York, details his further observations on the influence of the Roentgen ray upon sarcoma. His conclusions as to the relative merits of the toxins and the *x*-rays in inoperable sarcoma are as follows:

The time has been too short, and experience too limited thus far, definitely to decide this question. It is fair to say, however, that in several cases of inoperable round-celled sarcoma in which the toxins had been tried and failed, the *x*-ray caused entire disappearance of the tumors. Yet there has been a speedy recurrence in every one of the cases.

On the other hand, in a much larger number of cases of inoperable sarcoma, the tumors have entirely disappeared under the toxins, and remained well from three to ten years after treatment. He has had twenty patients with inoperable sarcoma remain well from three to ten years after the disappearance of the tumor under the mixed toxin treatment; of these, fifteen patients were well from five to ten years.

He has had the opportunity of observing the effect of the *x*-ray upon only six cases of spindle-celled sarcoma, and has found it to be exceedingly slight in all. Yet it is just in this class of cases—the spindle-celled—that the result of the toxin

treatment has been by far the most satisfactory, nearly 50 per cent of the cases of inoperable spindle-celled sarcoma having disappeared under the treatment in his own experience. In the round-celled variety, however, upon which the influence of the toxins is much less pronounced, the immediate results from the *x*-ray treatment seem to have been the best. In one of his cases, a very large inoperable round-celled sarcoma, two-thirds of the growth had disappeared under the toxin treatment, and at this point the *x*-ray was used in addition to the toxins, with the result that the entire tumor disappeared three months later.

In deep-seated and inaccessible growths the results from the toxins will probably prove better than that from the *x*-rays.

There is no objection to using both methods of treatment at the same time, and there is reason to believe that the combined treatment will give better results than either used alone. There are a large number of cases of inoperable sarcoma treated either with the *x*-ray or the toxins in which the inhibitory action is almost, but not quite, sufficient to check the growth, and it seems but reasonable to suppose that the combined action of the *x*-rays and toxins might be sufficient not only to check the growth, but to cause it to disappear.

Erythemata as Indicators of Disease.

In his annual address to the Dermatological Society of Great Britain and Ireland (reported in the *British Journal of Dermatology*, July, 1903) Dr. James Galloway calls attention to certain erythematous eruptions in association with general diseases.

Of the simple erythemata the most characteristic example is the ordinary flushing, frequently of emotional origin and usually transient in character, due to the action of the higher nerve centers in inhibiting the vasomotor supply of the cutaneous arterioles and the flooding of the capillaries unguarded by muscular fibers. In those suffering from feeble circulation this temporary inhibition is very annoying and often results in cold, clammy, and congested extremities. With these vascular disturbances is frequently observed a certain degree of tachycardia, naturally to be expected if there is a considerable amount of diminution in the peripheral vascular tension.

In the course of time these repeated functional disturbances cause a serious tendency for the skin itself to become edematous and to suffer severely from chilblain, a paralytic distention produced by local injury of the nerve muscular mechanism of the arterioles by cold.

Eruptions occurring in the various types of malarial fever are frequently observed, and of these the irregular forms of erythema are the most common. Improper food, or its imperfect digestion or elaboration in the tissues, produces toxins which give rise to exudative lesions of the type of erythema multiforme. These types of eruption are also seen in association with other visceral lesions. A well marked circinate erythema will often appear in cases of Bright's disease, tending to pass on to exfoliative dermatitis.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Insane Women and Gall-stones.

Manton (*American Journal of Obstetrics,* June, 1903; *British Medical Journal,* July 18, 1903) states that while it is proved that the insane are peculiarly liable to cholelithiasis, symptoms of that disorder are rarely manifested during life, so that the frequency of the condition amongst this class of patients can only be determined after death. Between January, 1897, and January, 1903, 133 female patients died at the Eastern Michigan Asylum. Of this number necropsies in which the abdomen was opened were made in twenty-three instances. Gall-stones were found six times in these twenty-three subjects, or in a little over 26 per cent of those examined. The ages of the patients varied between twenty-two and sixty-five years, five of the number being over thirty. Only two of the women had been pregnant. The cause of death was in one of the six cases infective cholangitis, in one ulcer of the duodenum, in one carcinoma of the liver. In the remaining three the disease was more general (tuberculosis, syphilis, nephritis). Beadles (1892) found gall-stones in from 10 to 12 per cent of cases examined at the Highgate Infirmary. Simpson (1896) placed the percentage of gall-stone disease in the West Riding Asylum at 20 per cent, whilst at necropsies on female patients in the Jena Asylum, Reidel found biliary calculi in 18 per cent. Stagnation of the bile current from bodily inactivity, more or less inevitable in asylum patients, seems to account for the frequency of cholelithiasis in the insane.

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THE VALUE OF GUDE'S PEPTO-MANGAN IN THE TREATMENT OF ANEMIA.—The year 1893, with the publication of the results of very careful chemical investigations of the conditions of the blood in various diseases, especially those of the blood itself by Professor von Jaksch, the well-known author of the *Handbook on Clinical Diagnosis*, marks a new era in our understanding of the various anæmic processes. Our former vague knowledge of these conditions was molded into definite shape and form chiefly by his successful effort to elucidate all the characteristic features common to the various forms of anæmia. He was thereby enabled as the first one to give a definition of this, up to this time, so pliable and undoubtedly much-abused term, anæmia.

Anæmia, in the broadest sense of the word, includes all those processes characterized by a decrease in the amount of albumin and by an increase of the liquid part of the blood; in other words, hypalbuminæmia and hydræmia are conditions present in all forms of anæmia, and this holds good not only in cases of primary anæmia, like leucæmia and chlorosis, but also in all so-called secondary anæmia.

This discovery enables us to understand the hitherto empirical fact that the treatment of anæmia requires not only or exclusively the administration of iron, but that all the metabolic processes, especially the introduction and assimilation of albuminous substances, must be increased, should the treatment be followed by success. But just this part of the treatment is exceedingly difficult, since one of the most constant symptoms which we meet with in the various forms of anæmia is a more or less high degree of anorexia. This anorexia completes the "circulus vitiosus" so frequently observed in clinical pathology, a circulus vitiosus which must be understood in each individual case in order to be amenable to successful treatment. For it is evident that a continuous anorexia will lead to insufficient nutrition, to subnutrition, thereby constantly increasing the condition of hypalbuminæmia.

The anorexia is, however, a natural sequela of this abnormal condition of the blood, in consequence of which, at least in the greater number of cases, the secretion of hydrochloric acid is decidedly diminished.

In the treatment of these cases, therefore, we must constantly bear in mind the condition—hypalbuminæmia. In order to facilitate the increase of albumin in the blood, notwithstanding the anorexia already existent, its administration in the form of easily assimilated peptones would be most rational.

Prompted by this thought, I began in the spring of 1893 to make use of Dr. Gude's preparation, known as pepto-mangan, in most all cases of anæmia that came under my observation, with the exception of those accompanying or following chronic infectious diseases, such as tuberculosis, or of malignant tumors, such as cancer, etc. I collected from my clinical record thirty-four cases. The greater number of these were closely observed, not only as to the influence of the remedy upon the subjective symptoms, but also as to its effects upon the blood by careful examinations which I carried out with the aid of Gärtner's hæmatokrit.

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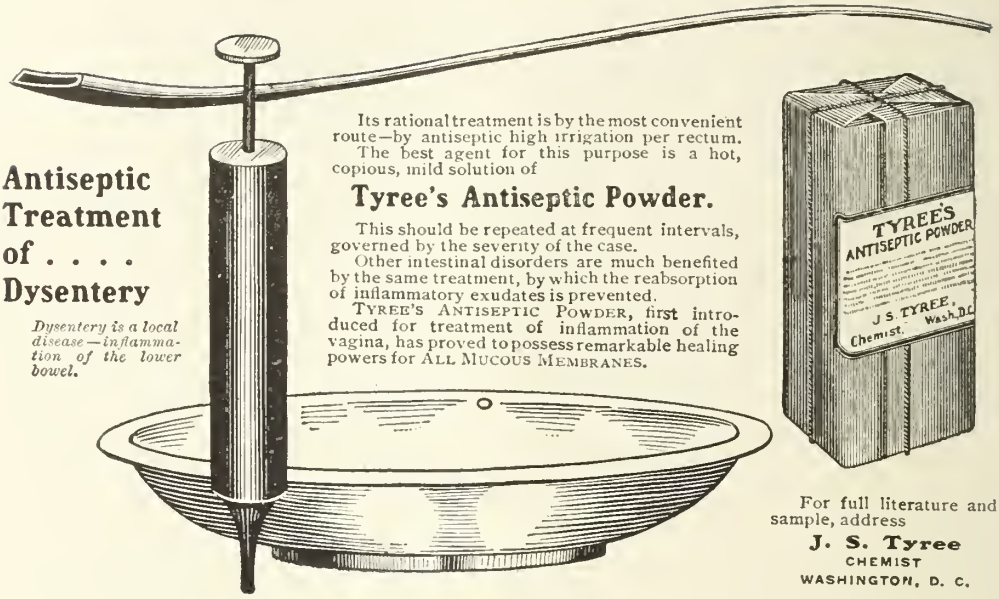

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I prefer this method of determining the efficacy of a remedy against anæmia to the old method of counting the red blood-corpuscles.

Although, generally speaking, the number of the red blood-corpuscles bears a certain proportion to the volume percentage, yet it would be wrong to identify both. In blood diseases especially, the knowledge of the volume percentage is undoubtedly of great importance.

During the above-mentioned period I observed neither cases of leucæmia nor of pernicious progressive anæmia. The thirty-four cases I treated with peptomangan were partly cases of chlorosis and partly secondary anæmia, occurring chiefly after subacute malaria and typhoid fevers. Of these I select six as paradigmata, as it were.

Two of these were cases of chlorosis and four cases were secondary anæmia:

CASE I.—Miss A. S., aged eighteen years; chlorosis rubra; oligocythæmia and oligochromæmia; palpitation of the heart; frequent pulse; coated tongue; fœter *ex ore;* constipation; irregularity in menstruation; easily fatigued; muscular weakness.

At the beginning of treatment, thirty per cent volume; eight days later, thirty-eight per cent; at the end of the fourth week, forty-eight per cent. Great improvement, slight catamenial disturbances only remaining.

CASE II.—Miss E. B., aged sixteen years; paleness of skin and visible mucous membranes; slight dyspnæa, short breath; oligocythæmia; palpitation of the heart; tachycardia; anæmic systolic murmurs, increased second pulmonary sound; disturbances in menstruation; tired feeling; sleepy condition.

At the beginning of treatment twenty-eight per cent volume of red blood-cor-

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puscles were found; increased within eight days to thirty-five per cent volume; after four weeks, forty-five per cent. Apparently complete recovery.

Case III.—R. T., aged five years; first treated for subacute malarial disease extending over two months. Patient had greatly decreased in weight. No appetite, retarded action of the bowels; great pallor; continuous tiredness and weakness. On examining the blood, I found thirty-five per cent volume of red blood-corpuscles; eight days later they increased to forty-two per cent; at the end of four weeks to forty-eight per cent. Complete recovery.

Case IV.—Mrs. A. R., aged twenty-eight years; suffered from chronic malarial disease. Mother of two children, the youngest four months old. Far advanced case of secondary anæmia. Patient unable to do any kind of work. Digestive disturbances. Determination of volume of red blood-corpuscles showed thirty-two per cent, which increased within eight days to thirty-eight per cent, and finally reached forty-five per cent. Great general improvement.

Case V.—Mr. T. K., aged nineteen years, butcher. Typhoid fever of moderate severity; during this disease panaritium of right thumb followed by lymphadenitis axillaris. Slow recovery. Anæmic condition very pronounced. No prominent single feature. General languor. Shortly after patient had entered the period of reconvalescence the blood exhibited twenty-six per cent volume of erythrocytes; fourteen days later an increase to thirty-two per cent volume; after four weeks, forty-six per cent. Patient now in very good health.

Case VI.—Mr. T. M., aged twenty-four years, saloon keeper. Ulcus ventriculi rotundum chronicum for seven years. Intense localized pains with frequent attacks of vomiting, sometimes of pure blood. Hyperchlorhydria of moderate degree, 3.2 per cent. Quite pronounced anæmia. After recovery from primary

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disease the volume of his red blood-corpuscles amounted to thirty-six per cent; eight days later we found forty per cent volume; finally, fifty per cent volume. Patient up to this time was free from symptoms of any kind.

In conclusion, I should like to state that similar good results were obtained in the remaining twenty-eight cases. It is especially worth while mentioning that no bad after-effects could be detected. In this connection I call special attention to the absence of constipation that could be traced back to the use of this preparation.

The dose varied from a teaspoonful to a tablespoonful three times a day an hour after meals, either in sherry or milk, according to the individual case, especially according to the condition of the digestive organs.—HUGO SUMMA, M.D., St. Louis.

THE Management of the Park View Sanatorium, Columbus, Ohio, are in possession of many letters from physicians who have sent patients to that institution, commending their work, especially in the cure of the Morphine habit.

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IN those poor victims of a pernicious "pepsin habit" where the stomach, instead of being encouraged to do its normal work, has been allowed to become a lazy, inactive member while an artificial digestant did the work, I find Seng a boon. Step by step it seems to lead the faltering gastric functions, until before the patient is aware of it, he loses the unhappy knowledge that he has a gastric apparatus. In subacute or chronic digestive disturbances, I know of nothing which equals it. —WILL A. MACKENZIE, M.D., St. Louis.

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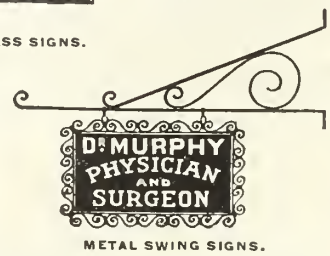

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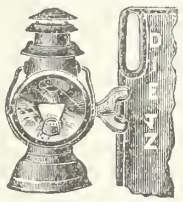

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THE MEDICAL AGE

VOL. XXI. DETROIT, SEPTEMBER 10, 1903. NO. 17.

ORIGINAL CONTRIBUTIONS.

ACUTE SUPPURATIVE ETHMOIDITIS.

BY JOHN A. THOMPSON, M.D., CINCINNATI, OHIO.

As research and clinical observation increase our knowledge of pathology, regions of the body previously ignored gain new interest and importance to the student and practitioner of medicine. More exact observation and analysis of cases enable us to trace one group of symptoms to many causes, and later to distinguish the underlying cause in any case. A few years ago appendicitis, salpingitis, suppuration of the gall-bladder, perforating ulcers of the stomach and intestines, and tubercular peritonitis were all grouped under one title in our medical text-books and called "idiopathic peritonitis." More exact knowledge of intra-abdominal conditions makes it doubtful if there is such a disease as idiopathic peritonitis. What was formerly believed to be a distinct disease is now known to be a symptom, secondary to various primary morbid processes.

A similar change in our views is evident in regard to the causation of intracranial inflammations. We are coming to regard them as secondary infections. Physicians are trained exclusively to deductive reasoning. If this were not so, when it was proven that meningitis and brain abscess were often secondary to suppuration in the mastoid antrum, the induction would have been drawn that similar brain lesions might come from suppurations in the accessory sinuses of the nose. Instead of this justifiable process of reasoning, we have waited for post-mortem observations, and in the ordinary post-mortem examination no attention is paid to the accessory sinuses. From these considerations we understand why cavities, whose inflammations are frequent and severe and sometimes attended by fatal results, are usually ignored in the diagnosis of disease. Perhaps the workers in the special field

of rhinology are to blame for this oversight in not publishing their observations in a manner to appeal to the profession generally. Most of the papers relating to the accessory sinuses of the nose are technical and of interest only to the specialist. The present paper is an attempt to present the subject of the acute suppurations in the ethmoid in a manner that will interest and profit all practitioners of medicine. It will not be technical, but largely a report of typical cases.

The predisposing cause of acute suppuration in the ethmoid cells is usually a slight chronic rhinitis extending to the lining mucosa of the cells. An attack of acute rhinitis or of influenza is the exciting cause. Numerous pyogenic bacteria grow in the secreted fluids and in the superficial layers of the inflamed membrane, adding greatly by their presence to the intensity of the process. The swelling of the membrane at the cell openings blocks them so the muco-pus cannot escape into the nose. The retention of the secretion in a most sensitive region causes the intense pain, which is the most characteristic symptom of the disease. The pain is deep-seated, throbbing, felt most acutely at the root of the nose, but extends to the orbit, and at times to all the affected side of the head. It persists for several days, if not relieved by treatment, before there is a spontaneous discharge of the retained secretions through the nose. Coincident with the pain is fever, often reaching 103° F. The fever, like the pain, is lessened with the evacuation of the ethmoid cells, unless general sepsis has occurred, when it will persist for days after the local condition has improved. Profuse sweats and occasionally severe diarrheas are symptomatic of the general septicemia. Respiration through the nostrils is impeded; the sense of smell is lost; the patient is dull and stupid, and it requires great effort for him to think clearly. Acuteness of vision is lessened, particularly on the affected side. Occasionally the orbital tissues are inflamed, the conjunctiva reddened, and the eye sensitive to light.

A case illustrating the occasional severity of the eye symptoms is that of Arthur M——, attorney, aged thirty years, who consulted me March 20, 1901, with the following history: He had contracted a slight cold a week previously. For three days he had suffered from headache, rapidly increasing in intensity. The pain was over the right orbit, and over the root of the nose on the same side. The day he came to the office the eye had become so congested and painful that he was unable to read. Having had previous nasal treatment, he believed the headache and eye symptoms were due to a nasal condition, and consulted me instead of his regular physician.

Examination showed intense congestion of the conjunctiva of the right eye. The cornea and iris were normal in appearance, and the pupil responded promptly to light. Examination of the nose showed four large polypi growing from the anterior inferior border of the middle turbinated bone, and blocking the normal openings of the ethmoid cells. The immediate removal of two of these polypi was followed by a gush of mucus and pus from the ethmoid cells, with prompt relief of the pain. On account of the bleeding, no attempt was made to complete the operation that day, as free drainage had been secured. Two days later the remaining polypi were removed. On the fifth day after beginning treatment the patient reported feeling perfectly well, and with only a slight congestion of the conjunctiva. In addition to the operative measures, a mild astringent wash was given for the eye, and a spray containing menthol and camphor was used twice a day for the nose. The case is a typical one of acute ethmoiditis superimposed on a chronic disease, with prompt relief through drainage of the ethmoid cells.

A case illustrating the septic condition sometimes produced by acute suppurative ethmoiditis is that of Louis H——, aged thirty-five years, policeman, who is an unusually well developed man. He is six feet one inch in height, and weighs, when in good condition, about 190 pounds.

While patrolling his beat, October 17, he had a moderately severe chill. He did not take to his bed, but returned to his beat the following night, when he suffered from a chill of such severity that he was obliged to go to bed and call a physician. He had a temperature at this time of 102°, but no variation from the normal pulse rate. The chill was followed by intense headache, limited to the right supraorbital and temporal regions.

He was not satisfied with the attention given him, and discharged the first physician at the end of the fourth day, and called Dr. J. A. Johnson. At this time he was having profuse sweats, so that the axillary temperature was normal, while the thermometer in the mouth showed a temperature of 102° to 103°, with a normal pulse rate. There was still intense headache, with dilatation of the temporal vessels upon the right side. The nose was occluded, with little or no discharge from the nasal passages. The patient had slept very little, if any, for several days. The trouble was diagnosed by Dr. Johnson as acute ethmoiditis, and in the afternoon of October 25 I saw the patient with him. At that time he had a temperature of 102° and pulse of 72; was very nervous and suffering intensely. Cocaine and adrenalin were applied to the affected nostril, and a

spray of adrenalin was given to contract the tissues and permit, if possible, the escape of pus from the ethmoid cells. Later the same day the temperature rose to 103°. The patient was given bimeconate of morphine and chloral so as to relieve the pain and induce sleep. The next morning cocaine was applied, and a probe-pointed knife was passed into the normal opening of the ethmoid cells, and this opening was considerably enlarged. Following this opening there was a discharge of pus from the ethmoid for about ten days. The pain over the right temple lessened, so that in a few days the patient was comfortable and could sleep without opiates. The adrenalin spray was stopped, and one of menthol and camphor was given. The fever continued for several days at about the same range as in the first week, and then began gradually to decline. The sweats were so abundant that the patient's underclothing required changing several times a day. To this septic manifestation was added a profuse diarrhea that greatly weakened the patient. This symptom was controlled by subgallate of bismuth and codeine, given every three hours. There was a gradual decline in all the symptoms, so that by November 9 the patient was free from fever, but still very weak. From this on convalescence was rapid. When seen at the office, on November 13, the nasal fossæ were apparently normal.

When the patient was so far convalescent that he began to read, he noticed that the sight of the right eye was seriously impaired, with a slight tendency to double vision. With the improvement of the general health this defect in vision rapidly disappeared.

In some cases the suppurating ethmoid may infect the maxillary antrum and produce the symptoms of the combined diseases. Physical examination only will show which is the primary disease. A case of this kind was that of Dr. J. G. F——, aged twenty-five years. On April 15, 1901, the patient had a slight chill. The teeth in the left upper jaw felt crowded, as though too close together; the left side of the face began to ache and burn, and the temperature rose to 101°. He was very nervous, and passed a sleepless night. Marked nausea and headache had been added to these symptoms when I saw him the next morning. Cocaine and suprarenal extract were used to contract the swollen turbinated bodies, and the normal openings were probed. A yellow offensive pus was discharged from the ethmoid, with relief of all the symptoms, except the toothache. As the patient is very nervous, codeine was given to relieve the pain. The relief from the severe symptoms was maintained for four days by means of local treatment. As the result of exposure there was a sudden

increase of the inflammation, with great aggravation of all the symptoms. The nose became dry and swollen, the headache intense, and the temperature rose to 104°. The left side of the face was swollen, with a dark-blue ring of venous congestion about the eye. Vision was much reduced, so the patient could not see ordinary print with the left eye. A profuse and very offensive diarrhea aggravated the weakness produced by the fever, pain, and loss of rest. Contraction of the nasal tissues and emptying the inflamed cavities gave more relief than morphine. The severe symptoms continued five days, after which there was a gradual improvement. The recovery has never been complete, as any exposure to cold increases the discharge of offensive pus, which is always present, although slowly lessening in amount.

Acute suppurative ethmoiditis, if promptly recognized and treated, may usually be brought to the convalescent stage in from four to seven days. When not diagnosed and no local treatment is given, it may cause general sepsis and last as many weeks. There is always the possibility of a fatal result from the sepsis or brain complications. Chronic suppuration with necrosis of the bone and never-ending headaches may follow neglected acute cases. If the disease is recognized as something more than a common cold or neuralgia, and free drainage secured by local treatment, recovery is usually prompt and complete.

REPORT OF A CASE OF PANCREATIC CYST.*

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On January 28, 1902, a man presented himself at the Medical Clinic of Cooper Medical College Dispensary, complaining of a "lump" in his stomach. On cursory examination a large abdominal tumor was found, and the man was referred to the clinic ward in Lane Hospital for further investigation. He entered the hospital the same day.

The following history was elicited: The patient was fifty-six years old, born in Wisconsin; by occupation a fireman on engines. His family history was negative; likewise his history of previous illness, except for a so-called "abscess in the bowels," on the left side, two years before. This abscess kept him in bed eight weeks, but finally broke spontaneously, discharging through the rectum, after which he recovered and remained well. He never had gon-

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orrhea, but had a sore on the penis twenty years previously, for which he was treated, and which evidently had no secondaries following it. He used alcohol occasionally to excess, but not habitually, and smoked moderately. For years his work had been that of a miner, involving hard muscular strain; but lately he had been an engine fireman.

In May, 1901, following some indiscretion in diet, he had an attack of abdominal cramps, accompanied by vomiting; this attack lasted for half a day, and was so severe that laudanum had to be taken. The next day, though weak, he was well enough to go back to work; but he had no appetite for two weeks afterward, and his food distressed him. Only a few days after this he noticed, for the first time, a little lump about the size of a walnut on the right of the middle line of the abdomen, high up. This had grown steadily ever since, until it reached its present size. He complained of no pain, except that just before meals, when hungry, the tumor seemed to become bunched and had a dull ache in it, relieved by taking food. His appetite was good, he had no nausea or vomiting, his bowels moved each day, he did not get short of breath easily, and had no dizziness. He had not lost in weight during the nine months since his illness began.

On inspection the patient was found to be a large, well-nourished man, rather florid in color, not pallid or icteric or cachectic. Before describing his abdominal tumor, let me say that no other part of the body showed any abnormality. Both lungs were clear throughout. The heart's area of dulness was normal, and the sounds, though distant, were clear. The radial pulse averaged 80 to the minute, was of fair tension and volume, regular in force and rhythm, but with the arterial wall moderately sclerotic. The urine was normal in amount and in analysis. There was no edema, no enlargement of lymphatic glands, no loss of knee-jerks.

On inspection of the abdomen a tumor was plainly seen. It occupied mainly the left hypochondrium and the epigastrium, extending slightly across into the right hypochondrium. Its contour was smooth and rounded. Its size, so far as its circumference was visible, was apparently that of an infant's head. It was evident that the tumor pulsated—that is, it was lifted up vigorously above the level of the abdomen with each beat of the heart. Furthermore, on watching the tumor for a time, its contour seemed to change—a bulging occurred in the left hypochondrium, gradually passed across the tumor to the right, and then disappeared, leaving again the regular, rounded outline at first seen. These waves were not continuously present, but

could always be brought out by kneading the tumor with the hand or by slapping it with a wet towel. Sometimes they were spontaneous. Invariably they ran from left to right. Finally, with a good light on the tumor, it was easy to see that it descended slightly on deep inspiration. Thus, by the eye alone, it was possible to determine several very important facts about this tumor—its location, its shape, its size, its apparent pulsation, the waves of peristalsis that ran across it, its descent on inspiration.

Palpation confirmed several of the facts as thus elicited: That the tumor was rounded and regular in outline; that it was about the size it looked to be; that it pulsated forcibly under the hand, especially at the summit; that it was moderately movable on deep inspiration. In addition, palpation gave three other important bits of evidence: first, the tumor was found to be distinctly elastic to touch, by which we learned that it contained fluid of some sort; secondly, there was no tenderness over the enlargement or about it; and thirdly, the pulsation was much fainter at the sides of the mass than at its summit.

Percussion showed that over the summit of the tumor there was relative dulness, within quite a regular circle, while around this there was everywhere tympany; but the circular area of dulness was much less in diameter than that of the tumor, as determined by palpation, showing that the mass must lie deeply, and that only its top reached and pushed out the abdominal wall.

Auscultation revealed a bruit, best heard over the summit of the tumor, and less distinct at the sides. This bruit was synchronous with the radial pulse, and we knew that it must be produced in the tumor or by the tumor, for there was no murmur over the heart to be transmitted to the tumor.

Such were the facts, as found in the history and physical examination. What was their meaning? To reach a diagnosis it was necessary, first, to consider what might possibly give rise to a tumor in the situation this one occupied, and secondly, to discuss each possibility in the light of the facts discovered. The possibilities were as follows: (1) An aneurism of the abdominal aorta; (2) a new growth of the stomach; (3) a new growth of the colon; (4) a hydronephrosis; (5) a hydatid cyst of the left lobe of the liver; (6) a pancreatic cyst.

1. An aneurism of the abdominal aorta would have occupied the situation that this tumor occupied. It would have been likely to occur in a man of this patient's years, with the arteries sclerotic. It would have been rounded and elastic. It would have given pulsation upon palpation and a bruit upon auscultation. In fact, on superficial investigation it looked very much like an aneurism.

But on more careful examination the evidence positively excluded this diagnosis. An aneurism has expansile pulsation, that can be felt at its sides as well as at its summit. But this tumor had its maximum pulsation at its summit, as the patient lay upon his back, while there was little or no pulsation perceptible at the sides when the tumor was grasped by both hands. Furthermore, when the patient was turned upon his hands and knees no pulsation at all was felt, either at the summit or at the sides. The bruit likewise disappeared with the patient in this latter position. Thus it became clear that the tumor, whatever else it was, was not an aneurism; but that it was situated deeply in the abdomen, lying upon the abdominal aorta, transmitting the latter's pulsation, and by its pressure causing the bruit.

2. The stomach came under suspicion: first, because of the location of the tumor, and secondly, because of the peristaltic waves discovered, running across it from left to right. But no malignant growth in the stomach could have reached such dimensions without producing symptoms, especially pain and vomiting, emaciation and cachexia. Further, no malignant growth of the stomach would have been so rounded and regular in contour, so elastic to the touch, and so free from tenderness. But to positively eliminate the stomach, two special methods of investigation were employed: first, stomach analysis; secondly, stomach inflation. Analysis of stomach contents, removed one hour after the Ewald test meal, showed a total acidity of 64, of which 50 parts were free HCl; in other words, a slight hyperchlorhydria, the very opposite of the characteristic analysis in malignant disease. Inflation of the stomach with carbonic acid gas gave even more valuable evidence; for after this was done nothing but tympany was found over the tumor on percussion, and yet the tumor had not been displaced by the distention. Evidently, therefore, the stomach lay directly in front of the tumor, between it and the abdominal wall. By its pressure on the pylorus from behind the tumor had caused partial occlusion, necessitating hypertrophy of the muscular wall of the stomach, and so giving rise to the visible peristaltic waves.

3. The transverse colon lay in the region the tumor occupied and might possibly have been its seat. But there had been no symptoms pointing to an affection of the bowel—no colic, no constipation or diarrhea, and no loss of weight. The waves of peristalsis observed might have occurred in a hypertrophied intestinal wall, but they would then have run from right to left, instead of from left to right. Most important of all, the tumor had been found by investigation to lie behind the stomach, an

anatomical situation that the colon or a new growth in it could scarcely by any possibility attain.

4. A hydronephrosis or malignant disease of the left kidney would not have been situated in the epigastrium and hypochondrium, but rather with its upper pole in the hypochondrium the tumor would have extended downward and inward to the lumbar and umbilical regions. A malignant growth, by the time it reached this size, would have caused marked cachexia and emaciation, and the urine would have contained blood, either constantly or occasionally. A hydronephrosis would probably have given a history of marked decrease at times in the size of the tumor, accompanied by an increase in the amount of urine. But the man had no cachexia or emaciation; his urine was perfectly normal, and remained so constantly during the days he was under observation; his tumor had never varied in size, except to grow steadily larger; and he secreted each day an amount of urine within the normal range and never widely varying in amount.

5. Could the cyst be one of the liver? The main argument against this was its situation with reference to the stomach. Having found that the stomach lay in front of the tumor, the tumor could not possibly occupy the left lobe of the liver, because of the anatomical relation of these viscera. Furthermore, there was found a much greater excursion of the liver on deep inspiration than of the tumor; for the liver descended approximately 7 centimeters, and the tumor only 3½ centimeters, which indicated quite positively that the tumor did not form a part of the liver.

6. By a process of elimination, therefore, pancreatic cyst became the most likely diagnosis. On the other hand, the essential points in the history—a gradually increasing tumor, without pain, vomiting, or wasting—corresponded with those found to occur in cyst of the pancreas; while the physical signs were those of a cyst originating deeply within the upper part of the abdomen, pressing on the abdominal aorta posteriorly, and upon the stomach anteriorly, all of which would be true of a pancreatic cyst. The absence of any of the signs commonly considered diagnostic of pancreatic disease, namely, glycosuria, jaundice, and fatty stools, was not looked upon as vital to the diagnosis, because with the cases of cyst reported these conditions have been far from constant.

After a week of observation and investigation, a diagnosis of cyst of the pancreas was thus reached; and on February 6 the cyst was evacuated by Dr. Stanley Stillman, and about one quart of fluid removed. This fluid was sent to the pathological laboratory for examination, and the report upon it, by Dr. William Ophüls, was as follows:

Dark yellowish red, slightly turbid, thin fluid; no bacteria in cover-slips or culture; after sedimentation the fluid is clear, dark yellow; at the bottom there is a thin layer of red blood-corpuscles, and on the surface a thin scum of fat, of which some is free, some enclosed in large cells. The fluid contains a considerable amount of albumin and a little reducing substance (Fehling's test). On addition of acetic acid a white, flaky precipitate is formed, which redissolves in an excess of acetic acid. The fluid dissolves several small shreds of fibrin (about 2-3 mm. in diameter) in the incubator in about twenty-four hours. On one glass the fibrin has disappeared completely; in the other there are small remnants left. The fermentation test shows that the reducing substance is sugar, and about 1-5 volume of CO_2 is formed.

The patient made an uneventful recovery and left the hospital on March 9. He was under observation until early in April, having his external wound dressed (drainage-tubes having been employed). On April 1 he was referred back to the medical clinic from the surgical side, because he had developed some edema of the legs. This led to an examination of the urine, and it was found that it now contained 2.2 per cent of sugar. Shortly after that the patient left the city, and I have never since seen him. A letter, however, was received from him since this paper was written, bearing date of February 20, 1903, in which he says: "At the time I left San Francisco, April 3, 1902, the wound where the incision was made lacked about three-fourths of an inch of being healed; but it was completely healed by May 1, and has never discharged since. I went to work in May at my old job of firing and running an engine, and worked at it all summer. During the winter I have been mining. My health is good, and has been good ever since I left the hospital, a year ago."

ORIGIN AND DEVELOPMENT OF HUMAN SENSATION AND THOUGHT FROM AN EMBRYOLOGICAL STANDPOINT.

BY J. M. FORT, M.D., PARIS, TEXAS.

This paper is not presented as original, but as gleanings from the most distinguished scientists of the day; the results of the labors of men of talent and indomitable energy who have devoted their lives to the study and elucidation of the occult laws of nature. The progress that has been made and the practical application of those results in the various arts and sciences are wonderful. It is true we are living in an "age of commerce"—an age in which our international communication and trade have attained

a magnitude beyond the conception of any previous age. It is true we have, in a measure, obliterated time and space by our telegraphs and telephones, and by the application of steam and electricity we have revolutionized all motor power; and we are working wonders along this line, making rapid and lasting improvements in the various pursuits of life. And if, as medical men, we have brought infinite relief to human suffering and pain by our knowledge of the therapeutic effect of certain remedial agents, and have saved life by our antiseptics and serum therapeutics, we owe it all to applied chemistry and a more thorough knowledge of the laws of individual life.

But it is so well known how much the past half-century has surpassed any, if not all, previous centuries, through these and other scientific discoveries, that we need not rehearse them here. If there be any one injunction or maxim that applies with peculiar force to the physician, it is the one given us by Socrates, "Know thyself"—in other words, "the proper study of the physician is man." And it occurs to the writer, as has been said by some eminent author, that the most important moment in the life of every man is the moment in which he begins his individual existence. And this is the moment when the sexual cells of both parents meet and coalesce for the formation of a single simple cell. In the formation of this cell, during the process of copulation, or immediately afterward, the existence of the personality begins; the independent existence of the creature commences just at that precise moment of time.

This autogenetic fact is supremely important from the fact that the most far-reaching conclusions and deductions may be drawn from it. For instance, in the first place we have a clear and correct perception that man, like all other complex animals, inherits all his personal characteristics, both of body and mind, from his parents; the general and in many instances the special characteristics, both of body and mind, being a special legacy bequeathed by the parents. And further, we very rationally conclude that this new being, this new personality, coming into existence as we have described, can be nothing more or less than a physical creature and can lay no claim to an unending existence.

It was only during the nineteenth century that our knowledge of human life attained the dignity of a genuine, independent science. It is true physiology had been regarded, at a much earlier date, as a branch of scientific medicine, and had been intimately associated with a knowledge of anatomy. But psychology never, until recent years, occupied the position to which it was entitled as a legitimate branch of physiology.

Not one medical scientist appeared, from the third to the sixteenth century, who dared to make independent research into man's vital activity and transcend the limits of the old theory laid down by Galen. It was not until the sixteenth century that such physicians and anatomists as Paracelsus, Servitus, Vesalius, and others dared to make experiments in this direction.

For more than a century afterward—yes, I may say from the middle of the eighteenth century until the middle of the nineteenth—medicine, especially physiology, was dominated by the old idea that a certain number of the vital processes may be traced to physical and chemical causes, but that the others are the outcome of a special vital force which is independent of physical agencies. In other words, there arose a complete physiological dualism. "There was an essential distinction drawn between organic and inorganic nature; between natural force and vital force; between bodily and mental activity."

In addition to this, we must add, as another hindrance to research along this line, the immense opposition which was everywhere offered to biological evolution on account of the close connection between questions of organic creation, and superhuman myths, and theological dogmas. Then, as now, if a man dared to express an independent opinion that came in conflict with some other man's cherished dogma, he was branded as an infidel or atheist, and wound up his earthly career by being prayerfully roasted at a stake.

The striking resemblance of man's psychic activity to that of the higher animals is a fact so well known that no educated man will attempt to controvert it. A great many of the uncivilized races still draw no material distinction between the two sets of mental processes, as the well known animal fables, the dogma of the transmigration of souls, and old legends clearly demonstrate.

When that able botanist, Schleiden, in 1838, determined by experimentation that the cell was the common elementary organ of all plants, and then proved that all the different tissues of the plant were merely combinations of cells, the extraordinary possibilities of this important discovery became apparent to all investigating, thinking minds.

But notwithstanding this discovery was made as far back as 1838, it was only very recently that cellular physiology and pathology (which is based upon it) were taught by our leading medical teachers. We are told that very many of our older physicians believed that human diseases were natural phenomena like other manifestations of life, and should be studied scientifically like other vital functions. In the main, however, it was

almost universally believed and taught by physicians and others, down to the middle of the nineteenth century, that diseases and all other ills to which humanity is heir were supernaturally inflicted upon mankind. "The truth is, however, in sickness, no less than in health, man is subject to the same 'eternal iron laws' of physics and chemistry as all the rest of the organic world."

The prevailing conception of psychic activity which I desire to contest in this paper considers the mind or consciousness and the physical organism to be two distinct entities, if, indeed, we may call what they regard as immaterial an entity. If mind, in the sum total of its psychic activities, and the body be two separate entities, they most assuredly can exist independently of each other; in fact, there can be no intrinsic necessity for their union.

The organized body, as all know, is a mortal, material nature, chemically composed of living protoplasm and its compounds. Mind activity, on the other hand, is said by the dualists to be an immaterial, immortal, spiritual agent whose mysterious activity is wholly incomprehensible even to its advocates, to say nothing of others.

"This conception of mental activity is, in a certain sense, spiritualistic, and its contrary, in a certain sense, materialistic." Then, again, this dualistic conception is supernatural and transcendental, since it affirms the existence of forces which can exist and operate without a material basis. And further, this theory leads to the assumption that, outside of and beyond nature, there is a spiritual, immaterial world of which we have no knowledge or experience, and of which we can learn nothing by natural means.

I heartily agree with that class of scientific investigators who believe this hypothetical spirit world, which is supposed to be entirely independent of this our material universe, and on the assumption of which the whole artificial structure of this dualistic system is founded, is purely a product of the poetic imagination of man.

I agree with the theory, advanced several years since by that brightest and deepest of thinkers, Ernest Haeckel, when he says: "The phenomena of the lowly psychic life of the unicellular animals and plants, their irritability, their reflex movements, their sensitiveness and instinct of self-preservation, are directly determined by physiological action of the protoplasm of their cells—that is, by physical and chemical changes which are partly due to heredity and partly to adaptation."

Now I would ask the advocate of the dualistic theory to explain how it is that all living organisms, without exception, are

sensitive, if they are not influenced by the condition of their environment and react thereon by certain modifications of their own protoplasmic structure? Can it be explained in any other way than by saying that light and heat, gravity and electricity, mechanical processes and chemical action in the environment, act as stimuli on the sensitive protoplasm, or shall I say psychoplasm, and effect changes in its molecular composition?

No, we must say just the same of the higher psychic activity of the higher animals and man, including the formation of ideas and concepts of the marvelous phenomena of reason and consciousness, for these have been phylogenetically evolved from the former, and it is merely a higher degree of integration or centralization of association or combination of functions which were in the unicellular animals isolated that brings about such results as reason and consciousness.

"For the profitable construction of comparative psychology," says an eminent scientist, "it is extremely important not to confine the critical comparison to man and the brute in general, but to put side by side the almost innumerable gradations of their mental activity." By so doing we find an unbroken chain of psychic development which runs from the lowest unicellular forms of life up to the mammals and to man at their head.

All are ready to admit that the very beginning of human life and human personality has its origin in the combined protoplasmic cell—that is, the cell produced by the union or coalescing of the spermatic cell of the male with the egg cell of the female. The union of these two cells and their nuclei forms what is called the stem cell or cytula. These two cells are attracted to each other by a mysterious force which scientists call a chemical sense activity. This cytula, as all physicians know, by segmentation forms various groups of cells; each group with sense-like precision, by segmentation and aggregation, formulates the various organs and tissues which go to make up the organism of the new being.

These groups of cells are all protoplasmic cells, and endowed with sense activity which enables them to select from the circulating medium of the mother just such material as constitutes the particular organ or tissue of which they are the architects and builders. Not only so, but so long as the organism lasts, or the being lives, each group of these cells puts forth its combined energy to keep its special organ or tissue in a condition to perform its normal function. If a bone be broken, the group of bone cells repairs it; if an organ becomes disabled or die, it is removed by the remainder, and by proliferation new ones take its place.

Now what do we learn from these demonstrated facts, facts that come under our observation every moment of our lives? We learn, first, that every human being and the higher animals are a simple cell at the beginning of life; secondly, we learn that this cell is formed by the blending or coalescing of two separate cells of diverse origin—the cell of the male and female; thirdly, we learn that each of these sexual cells has its own cell vitality—that is, each is distinguished by its own peculiar form of sensation and movement; fourthly, we learn that not only does the protoplasm of the sex cells and their nuclei coalesce at the moment of conception or impregnation, but also that their psychic elements or potential energies, which are latent in both and inseparable from the matter of the protoplasm, unite for the formation of a doubly increased potential energy of the combined simple cell.

Now if this be true, how can any other entity enter the human organism, since the entire structure is the outgrowth of cell proliferation and cell aggregation?

From what I have just said it will be plain that each personality owes his body and mental peculiarities and qualities to both parents, for the brain substance, and, I may say, the entire nervous system, is as much the mechanism of cell aggregation as any other organ or tissue of the human body, and it is also a purer protoplasm. In fact, the inheritance of the psychic qualities of the two parents is as demonstrable as is their body inheritance, for it is well known that every child inherits from both parents his peculiarities of character, his temperament, talent, acuteness of sense, strength of will, etc. Now I would ask if the inheritance of psychical phenomena is not as true and invariable as the body structure? "The blending of the two parental cells and their nuclei may be called the physiological moment of heredity, by it the personal features of both body and mind are transmitted to the new being." These autogenetic facts are beyond the explanation of the dualistic and mystic psychology which is still adhered to by some intelligent physicians and a few scientists.

A new creature comes into existence at the moment of conception, and yet it is barred by inheritance from being an independent entity either in respect to its bodily or mental qualifications. It can only cultivate the brain given it by inheritance. You can add no material potentiality to it, and whatever be its cultivation, there are restrictions which cannot be overcome. You are limited by race and family peculiarities, as well as the powers and capacities given the inherited brain itself.

Modern physiology teaches us that the cerebrum is the organ

of consciousness and mental activity in man and the higher animals, and this important fact is illustrated, and I may say demonstrated, by the pathological study of diseases.

If the brain substance be only the home or place of habitat of the mind, when parts of the cortex of the brain are destroyed why should its respective functions be affected? And when certain parts of the area become diseased, why does that portion of thought and consciousness disappear? In fact, it appears to me that there is proof enough in the most familiar phenomena of consciousness to prove its complete dependence on chemical or motor changes of brain substance.

If, on the other hand, consciousness be immaterial, as some contend, why is it that certain articles, such as tea and coffee, stimulate our powers of thought, and others, such as chloroform, ether, etc., deaden it. And why do others, such as camphor, musk, etc., reanimate the fainting consciousness?

If consciousness be an immaterial, spiritual, ethereal entity, or nonentity, incomparable to any material substance known to us, why should it be affected by the narcotic poisons, such as morphine, cocaine, absinthe, etc.? And please tell me how it happens that the person who becomes addicted to the persistent use of one of these poisons soon loses his acquired attributes of mind, and retrogrades and loses all refinement, culture, honor, and often virtue itself. Is it not a fact that these articles should have no immediate or direct effect upon an endowment of an entity, or rather a spiritual vapor, which sustains no relation to the brain substance other than by association?

Now I desire to ask a simple physiological question which, in the discussion of this paper, I would be glad to have answered. The question is: What is the soul of man if it is not the collection or sum total of man's cerebral functions? If it is not this, please tell me what it is, and what part of the organism it inhabits.

We know that man and all animals derive their sense organs —that is, seeing, hearing, smelling, tasting, and feeling—from the sensitive cells of the epidermis. This significant fact can be directly proven by observation of the embryotic development.

Again, it is very clear to my mind that all truth, all knowledge, all intellectual endowments, depend on two different but intimately connected groups of human physiological functions: first, on sense impressions of the object by means of the sense action or the sense organ, and secondly, by the action of the neurine cells combining their impressions by association into presentations in the brain. "The instruments of sensation are the sense organs, and the instruments which form and link together the presentations are the organs of thought."

We have found vital energy to be an element of the protoplasmic cell. We have found that this vital energy is gradually increased in a long chain of animals, in proportion to its aggregation. Scientists give us the following order of progression:

"In the lowest stage of organization the whole protoplasm, or rather psychoplasm, as such, is sensitive and reacts on the slightest external stimuli. This is the case with many plants and some of the most rudimentary animals.

"At the second stage of progression very simple and indiscriminating sense organs begin to appear on the surface of the organism in pigment spots, the forerunners of the nerves of touch and eyes. These are also found in many of the lower animals.

"In the third stage we find specific organs of sense, each with a peculiar adaptation. The 'specific energy' of these sense organs is not an original inherent power of theirs; on the other hand, it has been acquired by functional adaptation and heredity.

"The fourth or next stage is characterized by the centralization or integration of the nervous system and consequently of sensation by association of the previously isolated or localized sensations. This class of animals are still unconscious.

"Finally, at the fifth stage the highest psychic function, 'conscious perception,' is developed by the picturing or mirroring of the sensations in the central part of the nervous system, as we find it in man."

Now let me say, in conclusion, we demonstrate cell vitality by the unicellular protist, such as the spermatozoa of the male and the egg cell of the female, by the mimosa and fly-trap and other plants; also by the sponge, the infusoria, rhizopods, etc., among the animals with the ameba, heliozoön, and others. The stimuli from without produce on every spot of the unprotected surface of the unicellular organism external movements which take the form of changes of shape and often changes of place.

Then it is found, when a rise of animality of a progress is made in sensation and mobility, that there is an increase in the number of the protoplasmic cells in the organism of the animal. And as this protoplasmic material is increased, in that proportion we have an increase in psychic manifestations. This psychic progress extends from the lowest to the highest animal development, including man.

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EDITORIAL ARTICLES.

THE USE OF ADRENALIN IN SURGERY.

Perhaps the most remarkable drug which has been added to the Pharmacopœia of recent years is the suprarenal gland. The most convenient form of preparation is that of adrenalin. Since the discovery of the hemostatic properties of this drug it has been used extensively to make bloodless, limited fields for surgical operations. The July 25th issue of the London *Lancet* contains a lecture by a noted London surgeon, A. E. J. Barker, in which he relates his experience with adrenalin combined with B. eucaine in a number of major operations. He was led to make his trials from the observations of Dr. Baun, of Leipsic, who found that anything which retards or diminishes circulation of the blood in a part infiltrated with one or another analgesic agent enhances the potency of the latter. Barker abandoned cocaine in favor of B. eucaine as a local analgesic, considering the latter far less dangerous and fully as satisfactory in its results. The solution used by Barker is prepared as follows: Powders of B. eucaine and pure chloride of sodium sufficient to make 100 cubic centimeters (=3½ ounces) of the solution are kept in thick glazed paper ready for use. The amount in each of them is B. eucaine 0.2 gramme (=3 grains) and pure chloride of sodium 0.8 gramme (=12 grains); 100 cubic centimeters of boiling distilled water is measured off, and to this the contents of one of the papers is added, and then one cubic centimeter of Messrs. Parke, Davis & Co.'s solution of adrenalin chloride when the fluid is cool. As the adrenalin preparation is of the strength of 1 in 1000, it makes 100 cubic centimeters of normal saline solution with 2 in 1000 B. eucaine and 1 to 100,000 of adrenalin chloride in it—*i.e.*, distilled water, 100 grammes; pure chloride of sodium, 0.8 gramme; B. eucaine, 0.2 gramme; and adrenalin chloride, 0.001 gramme.

In describing his operation for the radical cure of inguinal hernia carried out under the influence of this analgesic agent, Barker says the hernia is first reduced, and then the index-finger is thrust with the skin into the external ring as far as possible. Along this finger the needle is entered and the inguinal canal is filled with 10 cubic centimeters of the solution, an endeavor being made to inject it all around the neck of the sac so as to reach at one spot or other the genital branch of the crural nerve. The needle is then entered at the external end of the line of incision in the skin and is made to infiltrate the superficial layers of the latter down to the root of the scrotum, making the resultant wheal at least an inch longer at each end than the incision is to be. Again the needle is entered about half an inch to the inside of the posterior superior spine of the ilium, and pressure on the piston is at once begun slowly as it is thrust toward the ilioinguinal nerve to the depth of about one inch in moderately fat patients. The needle should then be partly withdrawn and be thrust in different directions toward the usual course of the nerve trunk until the whole 10 cubic centimeters has been used up. The same maneuver is repeated at points about one inch above the middle of Poupart's ligament, where the iliohypogastric nerve is most conveniently met. Then the leg is raised and another syringeful is injected along the ramus of the pubis and the root of the scrotum or labium. In all 50 cubic centimeters of the solution should be used. Barker found that after the injections were completed it was necessary to wait twenty minutes before commencing the operation. Success attended this procedure in the hands of Barker in several cases of strangulated hernia, two cases of castration for tuberculous testicle, as well as a number of operations not requiring so much time. The work done by this surgeon shows that there yet remains a great deal to be learned of the uses to which adrenalin may yet be put in the performance of major operations.

EDITORIAL NOTES.

Death from Tetanus.

During the past month the press of the country has been filled with reports of deaths from tetanus due to the deadly toy pistol, which is so extensively used by the youth of this country in celebrating the glorious Fourth. The *Chicago Tribune,* which has made a careful investigation of the question, concludes that the toy pistol is responsible for no less than 52 deaths and 3665 per-

sons injured. The *Philadelphia Record* says that the fatality list will not fall short of 250 persons, and adds: "This is a fearful sacrifice to make to the celebration of a national holiday. And it becomes all the more horrible when its uselessness is considered. The parents and guardians whose thoughtlessness and heedlessness are responsible for most of this slaughter should ask themselves whether it is worth the while. But parents' remorse alone will not remedy the evil. The laws now on the statute books against the sale and use of firearms must be strengthened. This year's list of Fourth of July casualties, which is larger than ever known before, should arouse public opinion to the need of energetic action."

The Effects of the Becquerel Rays Upon Bacteria.

Some very interesting observations relative to the action of the Becquerel rays upon bacteria have recently been made public by Drs. Pfeiffer and Freidberger of the University of Koenigsberg. The experiments made by these investigators show that the rays from radium have very deadly effect upon certain bacteria. They exposed for forty-eight hours in a dark room a gelatin plate which had been freely sown with typhoid bacilli to the radiation from a small quantity of radium bromide. The effect was most decisive, by far surpassing the results achieved by *x*-rays. The bacilli were either killed or their growth completely stopped. Similar results were obtained in the case of cholera bacilli, and this coming in shorter time (sixteen hours), while in the case of anthrax bacilli it took three times twenty-four hours to destroy them. Just what place in therapeutics these rays will have is at present hard to forecast. Already from the experiments of a Vienna physician they have proven more valuable in the treatment of inoperable cancers than the *x*-rays.

A Memorial to the Late Major Reed.

A meeting was recently held at Bar Harbor, Me., for the purpose of discussing a memorial to the late Major Walter Reed. Leading professional men from all parts of the country were present, and addresses were made by a number of distinguished men. It is to be hoped that the committee in charge will soon have on hand funds sufficient to erect a fitting memorial to the man to whom the world is so greatly indebted for his magnificent services in the investigation and suppression of yellow fever.

ITEMS AND NOTES.

One and a half million quarts of milk are distributed in New York City every morning.

There has been started in Malden, Mass., a goat farm for the production of goat's milk.

Over 100 deaths from cholera infantum have occurred among infants during the past month in Buffalo.

The report of Commissioner of Health Carter for March, 1903, shows an annual death-rate for Manila of 21.01 per 1000 population.

Dr. Charles B. Hare, of Ann Arbor, has accepted the appointment of government bacteriologist in the Philippines, at a salary of $1500.

Two Philadelphia physicians were recently fined five dollars and costs each for failing to report cases of smallpox coming under their observation.

The Russian Minister of Public Works has under consideration the establishment of a regular service of medical officers for trains which have to travel long distances.

Of the $125,000 appropriated for the new marine hospital at Buffalo, $22,000 is to be expended for the site, $100,000 for the building, and some $3000 for unforeseen expenses and for beautifying the grounds.

The American Orthopedic Association will publish early in August the first number of a new quarterly, the *American Journal of Orthopedic Surgery*. It will replace the Transactions, formerly published by the association.

A memorial to Pasteur was unveiled July 31 at the village of Marnes la Coquette, near Villeneuve l'Etang, where the great chemist died, and where he for a long time conducted his researches in connection with his cure for hydrophobia.

The Organization Committee of the Universal Exhibition to be held at St. Louis has announced that it will refuse admission to all articles actually or potentially hurtful or dangerous. In this class are included patent medicines the formulæ of which are kept secret.

The enormous increase of insanity in Ireland (28,187 cases in 1881, 44,884 in 1901) is believed to be due largely to the fact that the large emigration of young and healthy persons leaves behind a stock more prone to all diseases, including insanity, than formerly.—*Exchange.*

The average of accidents during the Automobile Club fortnight in Ireland did not reach that of an ordinary driving tour, or a week of racing on the flat. At Cork an Irishman said, "Sure it was very successful, but there were no accidents at all." The "but" is delightful.—*Exchange.*

The Zambaco prize, offered by the French Society of Dermatology, was not awarded this year, but an encouragement of $70 was given to Messrs. Bezancon, Griggon, and Le Sourd for their monograph on "Bacteriology of Simple Chancre," and to Messrs. Carle and Meynnet for one on "Digestive Disturbances in Eczema."—*Journal of the American Medical Association.*

Interesting facts regarding personal cleanliness were recently related at a conference held at Charleville, France. Of 100 working people selected at random, 2 took baths in a bath, 18 washed their feet when they changed their stockings, 52 washed their feet twice during the winter, their bodies and neck every Saturday, and their heads never, while 28 never washed at all.—*Exchange.*

An interesting case of the longevity of a feeble youth was revealed in a police court of Paris. A man called to complain of a burglary in his apartment; he said his name was Duval, and that his age was 100 years. The story was confirmed by his papers. Duval was born July 4, 1803, and as a youth was refused as a conscript. He has lived in one house ninety-nine years, and has grown progressively stronger. He eats and drinks well, walks strong, and has a stentorian voice. He remembers seeing Napoleon in 1813.—*Exchange.*

There is a movement in progress to form a union of the faculties of the Medical College of Indiana and the Central College of Physicians and Surgeons, with a possibility of its consummation. There would then be but one medical college in Indianapolis, and it may become a medical department of the Indiana University, which is located at Bloomington. With a view to consolidation a committee from each institution has been appointed to outline an agreement satisfactory to each interest.—*Journal of the American Medical Association.*

The Phillip Knoll prize of 2000 crowns was awarded this year for the first time, and not strictly in accordance with the ideas of the founder. It should be awarded to some one of the younger German-Bohemian scientists for the best work done in the last three years. Instead of that, it was divided among Professor Bayer and Dr. J. Langer for work on congenital hernia and the lymph glands and bee poison, both dating from several years ago, and A. Fischel and O. Bail for recent research.—*Journal of the American Medical Association.*

In order to provide better facilities for von Leyden's research in cancer in connection with his medical clinic, the Berlin University authorities have erected a laboratory and two wards in the grounds of the Charité Hospital, near Koch's barracks, for this purpose. Each ward has eight beds with two private rooms. The institution was formally inaugurated June 8. Dr. E. Blumenthal has charge of the work, assisted by F. Meyer, L. Michals, and the chemist. Wolf, Loewenthal, and Braunstein are voluntary assistants.—*Exchange.*

The Paris authorities have bestowed medals on seven nurses in the hospitals who during the past year have contracted a contagious disease from some patient in their care. The medal is awarded to "victims of professional duty." A pension is given the family of persons who have died,"victims of professional devotion" referring to some exceptional act of self-sacrifice. This pension was recently awarded to the family of a young French physician in Algiers, who himself proceeded to disinfect the premises where plague had occurred when no one else would approach the place.—*Exchange.*

From an exchange we quote the following: "Mail advices from Manila announce that the bill regulating the traffic in opium among other things provides that no opium shall be sold to a Filipino, and that it shall be sold to a Chinaman who has attained his majority only. Protection is afforded to druggists who handle opium for medicinal purposes, and machinery is provided the police for keeping track of its importation. The revenue derived under the operations of the act is to be used to defray the expenses of educating young Filipinos in American schools, that they may become school-teachers."

The first national antialcohol congress will be held in Paris from October 26 to 29, under the honorary presidency of M. Casimer-Perier. The programme consists of two parts—the first

part will be devoted to a review of the existing situation in regard to alcoholism and the struggle against it; the second to the plan of the campaign: this will include the action of the state and local authorities, the medical profession, the clergy, etc., the institution of an educational propaganda among young people, and the securing of the powerful influence of women. The congress will also discuss the organization of a campaign against alcoholism by means of the federation of all temperance organizations directed by a permanent committee.—*Medical Record.*

Inquiry recently instituted as to the increase of quacks in German towns brought out some interesting facts, though the replies were not as general and complete as was desired. In the Province of Breslau, says the *Journal of the American Medical Association,* there were reported 228 quacks and 98 cases of malpractice, with 17 deaths at their hands; of these 44 occurred in the town of Breslau, with two deaths. Of the 228 quacks, 141—113 men and 28 women—throve in the town of Breslau, and 70 who were not resident there treated Breslau patients, and visited occasionally. In the Rhine provinces the inquiry brought out the result that from the 2351 resident physicians in 539 communities, there were received 86 reports from 71 localities, which gave account of 288 quacks in 198 towns. Of these 288 quacks, 132 were reported from the Province of Dusseldorf.

An International Congress for the Study of Tuberculosis will be held in Paris from September 24 to October 1, 1904. The congress will comprise a medical, a social, and a technical section. In the medical section the following are the questions proposed for discussion: (1) The treatment of lupus by the new methods; (2) the early study of tuberculosis by the new methods; (3) comparative study of the different forms of tuberculosis. The social section will discuss the following questions: (1) The etiological factors of tuberculosis; (2) the value of the various methods of treating tuberculosis; (3) assurance and sickness societies in relation to the struggle against tuberculosis. The technical section consists of a museum in which will be exhibited collections of anatomico-pathological, histological, and bacteriological specimens and preparations; tables of statistics, plans, and designs, for the installation of hospitals, sanatoria, and dispensaries; publications of all kinds relative to antituberculosis leagues and associations; and industrial products used in the treatment of tuberculosis. The president of the congress is Professor Brouardel.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Anatomical and Clinical Investigations into Cancer of the Stomach and Intestines.

At a recent meeting of the German Society for Surgery Dr. Peterson (*Medical Press,* July 29, 1903) reported his anatomical and clinical investigations into cancer of the stomach and intestines. They had extended over 160 cases of cancer of intestine and 100 of cancer of the stomach. The development of the disease was either multicentral or unicentral. According to his investigations they only developed unicentrally in lymph tracts. The outer portions of the growth were useless as regarded the study of histogenesis, as they were not developed primarily. This development could not be brought into accord with the parasitic theory. Bowel carcinoma grew more deeply, whilst carcinoma of the stomach spread more laterally and superficially. After extirpation recurrence could only develop from cells previously diseased. Another question was whether disease must always return from such diseased cells. Everywhere were seen transitions from cancer to normal cells; so also in the stomach. In their margins were seen peculiar cells, but he could not say whether they were carcinomatous or not; whether normal cells were formed from them, or whether they degenerated carcinomatously. In the glands also in carcinoma of the uterus similar cells were seen which were not held to be carcinoma. Such cells, in the speaker's opinion, do not give rise to recurrences; the system in virtue of its protective power (phagocytosis) might become master of the diseased cells, so that small gland collections met with in extirpation of the disease in the stomach might be left with safety. The demand to fully clear out every trace of disease in carcinoma of the stomach rests only on theoretical grounds. He has operated on fifty-seven cases of carcinoma of the stomach. Thirty of these operations had been done over three years; of these, seven were still living, in whom it was not possible to remove everything. Up to the present no recurrence has taken place in any of the seven. One has to distinguish between organic recurrence, connective tissue recurrence, and gland recurrence, which are of varying importance in the different organs. This has to be decided at the operation.

Prostatic Hypertrophy and its Radical Cure.

W. P. Herrick (*Medical Record*, Aug. 15, 1903) says as the statistics of simple perineal prostatectomy accumulate they will be more definite. Now these cases must be judged more or less individually.

When chronic posterior urethritis and prostatitis exist, these should receive appropriate treatment, the catheter be used to withdraw residual urine, and the result carefully watched.

In patients in whom operation has become too hazardous, we must endeavor to improve their general condition, and if necessary do aspiration or perineal cystotomy under cocaine, endeavoring to prepare them for radical operation or alleviate their symptoms. Advanced arteriosclerosis should also be carefully considered.

Our responsibility is in recognizing and properly urging operation when indicated; if it is refused we have done our duty, and the patient must abide the issue with such means as remain.

Palliative operations should rarely or never be done, from their hazardousness and inefficiency.

Prostatic hypertrophy is now curable by means of an operaiton which, though serious, is not hazardous when undertaken in proper time and manner. Failure of palliative treatment, of course, gives hope alone through operation, but should be anticipated rather than persisted in. In general infection, especially if repeated, as in irritable cases, obstructive cases unless promptly relieved by the sound and under observation, if residual urine is increasing despite catheterization, or the patient's general health is being impaired, all indicate the time for operation.

Anatomically, and now surgically, the simple perineal is the direct and preferable route. Rarely suprapubic exploration or lithotomy may be advantageously added to it.

As statistics accumulate we believe that radical cure may further anticipate the course of the disease.

The Causation of Cancer.

Robert Bell (*Medical Record*, August 15, 1903) sums up the predisposing causes of cancer as follows:

Persistent and prolonged retention of feces containing an undue proportion of decomposing albuminous material, from which enterotoxins are derived, and by absorption conveyed to the blood.

The blood thus contaminated produces a depraved condition

of the nervous apparatus, thereby handicapping the functional activity of the various organs, interfering with cell metabolism, and eventually culminating in anemia in young persons, or cachexia in the elder.

If the functions of the thyroid gland are at fault, these toxins which otherwise would be neutralized remain in a position capable of producing serious mischief.

If saccharomycetes are present in the blood, this toxic material is liable to undergo chemical changes, resulting in the formation of uric acid, when uricacidemia will result.

The presence of these toxins in the blood, alone or combined with uric acid, exerts a pernicious influence upon cellular structures and confers upon them a predisposition to take on a malignant metamorphosis.

Prolonged or repeated irritation of a part is liable to rouse into malignant activity cells which otherwise would have remained dormant.

The vitiated condition of the blood, by prostrating the physiological vitality of the various organs and cellular structures and paralyzing the *vis medicatrix naturæ*, affords every facility for the new growth to establish its identity and increase its area at the expense of its environment.

Closure of Wounds.

The use of sutures, according to M. F. Porter (*Journal of the American Medical Association*, July 25, 1903), should be avoided save where necessity demands their use. Many wounds in which sutures are now commonly used may be coapted more perfectly, more speedily, and more safely without the use of sutures.

Tension and moisture are the only conditions making sutures necessary.

When sutures are necessary, buried absorbable sutures should be used in all cases where there is no infection.

The necessity for drainage does not contraindicate the use of adhesive plaster for purposes of coaptation.

It is doubtful if non-absorbable suture material should ever be used with a view to its remaining permanently.

Non-absorbable sutures are not necessary nor advisable save in intestinal work and in the presence of sepsis.

In those cases in which non-absorbable sutures are necessary, that method of applying them should be chosen which will subject the tissues to the least possible trauma, produce the fewest possible avenues of infection through the skin, and permit of their being removed when they have fulfilled their mission.

Influence of Castration on the Blood of Female Animals.

Breuer and Seiller *(Wiener klin. Wochenschrift,* No. 30, 1903) have worked for the past three years endeavoring to determine the influence of the ovary on the elaboration of the blood. They report the following results of their researches: Only in young animals between the age of seven and ten months did they find the blood to be at all influenced; in older animals their observations were negative. Immediately after castration there was a general loss of all the blood elements, the normal being regained after a period of two to six weeks, but it did not show a condition similar to human chlorosis. Controls demonstrated beyond a doubt that the influence of the operation or narcosis had nothing to do with this reduction, and the authors believe that by the results of these experiments the genital theory of chlorosis is supported.

Abscess of the Spleen.

W. M. Spear *(Journal of the American Medical Association,* Aug. 1, 1903) says that abscess of the spleen is rare, but not as rare as we are led to believe.

It is most likely to occur after malarial or typhoid fever, because of the hyperemic condition of the spleen in these diseases.

Absence of fever does not preclude the possibility of an abscess.

Early diagnosis and operation are very essential and give a fairly favorable prognosis.

Splenectomy is the operation of choice, but its application is limited.

Preliminary aspiration is an unnecessary procedure, and its use should be condemned.

Tracheotomy in Tracheobronchial Syphilis.

A. Couner *(American Journal of the Medical Sciences,* July, 1903) presents an analysis of 128 cases, together with a recent case under his own care, of syphilis of the trachea and bronchi. He states that in most instances of this affection tracheotomy is to be regarded as a futile and irrational method of treatment. In tracheobronchial syphilis it can serve only one of two purposes: first, to relieve urgent dyspnea by admitting air into the trachea below the seat of obstruction; and secondly, to aid in the mechanical treatment of stricture by the introduction of bougies or can-

nulas. Concerning the first use, it is evident that this must be restricted to lesions of the upper end of the trachea. As a means of furnishing an entrance for instruments for the dilatation of strictures its value is somewhat uncertain. It may be doubted, the author thinks, whether a stricture situated at the lower end of the trachea or in a bronchus can be approached more easily through a tracheotomy wound than through the larynx. In either case the operation will be found a difficult one, and demands the skill of an expert laryngologist. The latter method, it is held, has the certain advantage over tracheotomy in the diminished probability of a complicating inhalation pneumonia.

MEDICINE.

Malaria in Temperate Climates.

There is no evidence, according to Theobald Smith *(Boston Medical and Surgical Journal,* Aug. 6, 1903) that any but the tertian form of malarial fever can be propagated in temperate climates. The original source of tertian infection must be looked for in the blood of individuals coming from permanently infected localities in our own country and in Southern Europe. There is no definite information as to the stage of disease or relative immunity in which mosquitoes may become infected, but analogy with similar diseases of animal life indicates that the gametes are not formed early in the disease, and that relatively immune persons are in the most danger, especially after fresh exposure, because in them gametes form very promptly without causing much or any clinical disturbance. The dissemination of infection is most easily promoted in our latitude when people live in a crowded condition, unprotected from mosquitoes, and near breeding-places of Anopheles. The decline and disappearance of malaria after importation and epidemic prevalence is in part due to relative isolation of the inhabitants and protection by quinine and from mosquitoes, and in part to the absence of persons partially immunized by long exposure in endemic localities. There is some evidence that sewage pollution in surface waters favors mosquito larvæ, directly through increase in food supply, and indirectly by injuring their enemies. Since malaria may be latent and hence unrecognized, and since it is largely a disease of the lower classes, whose movements it is difficult to control, the best method of reaching it is to suppress the mosquitoes whenever possible. Malaria is of sufficient importance to become a notifi-

able disease. Infants and children exposed should have their blood examined during any disturbance of health. In times of epidemic malaria it may become necessary to make special regulations governing infected persons. It is of great importance that the relation of the widely distributed species, Anopheles punctipennis, to the parasite of tertian fever be accurately determined. It is also highly desirable to test the infecting power of fresh cases of tertian fever as compared with relapses and with individuals from malarial countries.

Albuminuria in Diabetes Mellitus.

A. R. Elliot (*Journal of the American Medical Association,* Aug. 8, 1903) says that albuminuria is a frequent development during the progress of diabetes, over one-third of all cases manifesting this symptom at some time during their course.

Albuminuria in diabetes may, for clinical purposes, be divided into two varieties—toxic and degenerative.

Toxic albuminuria is generally of acute onset, arising during the later stages of the severe forms of the disease, as the result of irritation of the tubular epithelium, producing hyaline degeneration thereof, and due to the presence of acid toxins in the blood and urine.

Toxic albuminuria is an invariable precedent and accompaniment of coma, and may be regarded as of the gravest prognostic significance.

Toxic albuminuria with its associated renal changes is the final determining cause of coma diabeticum, by producing a heaping up of sugar and toxins in the blood, through diminished permeability of the renal secreting structure.

Degenerative albuminuria occurs with great frequency during the progress of the mild type of the disease, and is of renal origin, which arises from prolonged hyperfunction and impairment of renal nutrition.

The appearance of albumin under these circumstances, while of little immediate significance, if of the greatest eventual importance, as indicating the intrusion of chronic nephritis into the already manifold clinical difficulties.

A few cases of albuminuria in diabetes may be produced by venous stasis due to cardiac asthenia, and under such circumstances will be associated with other evidence of heart failure.

Albuminuria in diabetes is never devoid of importance. It may be of the gravest significance, as we have seen, and is always of sufficient import to receive the earnest attention of the clinician.

Chronic Rheumatism.

At the annual meeting of the American Medical Association held in May, James J. Walsh, of New York, read a paper entitled "The Passing of Chronic Rheumatism" *(Boston Medical and Surgical Journal,* May 21, 1903). He said there are four different conditions, which are often called chronic rheumatism, but without any good reason. The most common form of pseudo-rheumatism is the relaxation of joints which occurs in the ankle, and which is known as flatfoot, or which follows the dislocation of joints, producing tissue changes which make the patients very susceptible for all their after-life to changes in the weather. Just as there are relaxations of the ankle-joints, so could there be relaxations of other joints. A second form occurs in the so-called occupation neuroses. A third form of vague pains often attributed to rheumatism is neuritis. Persons who are exposed to the weather and who use one set of muscles more than another, especially if there is an absorption into the system of such toxic substances as lead and alcohol, are specially prone to a neuritis in the nerves supplying the overworked muscles. Again, a certain number of cases of so-called chronic rheumatism in the United States presenting evidences of joint degeneration following acute attacks of arthritis are undoubtedly not genuinely rheumatic in character, but are of gouty nature. He said that according to recent statistics gout is only three-fourths as frequent in the States as in England. Acute gout is very difficult to differentiate from acute rheumatism. After considering briefly three forms of rheumatoid arthritis, he stated that it is easy to understand that but little space is left for the so-called chronic rheumatism. Certainly cases of true chronic rheumatism with progressive pathological changes in joint tissues, for which no other cause except rheumatism can be found, are very rare, and he confessed that he has never seen such a case.

Fetal, Congenital, and Infantile Typhoid.

J. L. Morse *(Medical News,* Aug. 1, 1903) believes the following assertions to be justified:

(1) The typhoid bacillus may be transmitted through an abnormal, and possibly also through a normal, placenta from the mother to the fetus. The resulting infection is in the nature of a general septicemia and does not present the classical symptoms of extra-uterine typhoid. (2) The fetus usually dies before or soon after birth. If, however, the child should not perish too

soon, some of the pathological lesions of typhoid may be made out. Some imperfectly reported cases suggest that at times recovery may possibly occur. (3) Infection of the fetus by a typhoid mother does not necessarily occur. It is possible, though there is no proof of it, that a fetus may go through an infection *in utero* and be born alive and well. (4) Infantile typhoid fever, so far as our present knowledge warrants the drawing of conclusions, has the same symptomatology as the typhoid of adult life. It is actually, and not merely apparently, less frequent in the very young than it is in adults. There is so far no satisfactory explanation for this. Theoretically infants should be more liable to infection than adults.

The Incidence and Mortality of Croupous Pneumonia in Infancy.

From his observations extending over a period of two years, made at the East London Hospital, C. Riviere *(Lancet,* July 18, 1903) draws the following conclusions:

(1) That croupous pneumonia occurs in infants below the age of two years as frequently as, and probably oftener than, in older children; (2) that in infants a diagnosis between croupous pneumonia and bronchopneumonia with lobar consolidation is often impossible, many cases of bronchopneumonia with lobar consolidation appearing in the post-mortem room with a diagnosis of croupous pneumonia; (3) that on account of this difficulty statistics based on diagnosis alone are quite untrustworthy; (4) that this error can largely be eliminated after the manner described *(i.e.,* studying autopsy cases); and (5) that the mortality in croupous pneumonia is largest in the first year of life (25 per cent), is considerable below the age of two years (15.4 per cent), but for children above this age is comparatively small (2.3 per cent).

A Clinical Contribution to the Knowledge of Tuberculous Disease of the Female Urinary Tract.

At the recent meeting of the New Jersey Medical Society, E. J. Ill (reported in *Medical Record,* August, 1903) presented this paper, which was based on a study extending over the past thirteen years. The diagnosis, he said, could not be considered until the tubercle bacillus had been found, yet this is not always easy. The origin of such tuberculous inflammation is most frequently in the pelvis of the kidney. Cases were presented to show that not only the bladder but the ureter might apparently recover

spontaneously. He did not, however, wish to be understood as advising that an infected ureter should be left undisturbed. The most frequent symptoms are pain in the loin and iliac region of the affected side, followed by pain in the bladder. Pain on urination always means infection of the bladder, the most frequent sites being the trigone and the neck of the organ. Hematuria should always be looked upon with suspicion. It most frequently points to stone or malignancy, but the fact that it might be dependent upon tuberculosis may be lost sight of. Every case of pus in the urine should be examined for tubercle bacilli when other obvious causes are absent. The prognosis of tuberculous disease of the urinary tract is usually considered to be bad, nevertheless there are patients who recover and remain well for years. In making the bacteriological examination for diagnosis, one should be careful to exclude contaminations, particularly with the smegma bacillus, by using a specimen of urine obtained by means of the catheter under strict aseptic precautions.

Some Comparative Examinations of Breast Milk and Cow's Milk, and the Effect of the Addition of Alkalies and Other Antacids to Cow's Milk.

C. J. Kerley, A. Gieshen, and G. F. Meyers (*Medical Record,* Aug. 8, 1903) say that breast milk and cow's milk are both acid. The litmus-paper test for milk is unreliable because of the variation in the quality of litmus paper, and the litmus taking part in the reaction and not acting as an indicator. The effect of adding lime water or bicarbonate of sodium to feeding is to retard or inhibit the formation of curds by rennet.

The teaching that lime water, bicarbonate of sodium, or carbonate of potassium should be added to fresh milk or feedings simply because they are antacids is erroneous.

The addition to milk or feedings of alkalies or salts that become alkaline in solution is an empirical method of aiding digestion by preventing the formation of dense curds that would slowly leave the stomach and be difficult of digestion in the intestine.

Experimental Albuminuria.

Halpern (*Berliner klin. Wochenschrift,* No. 30, 1903) injected rabbits with a one- to two-per-cent solution of albumin subcutaneously, and then examined their urine for albumin; this was only occasionally found, and there was no elevation of tempera-

ture. By injections of tuberculin albuminuria now and then occurred, and similar results were obtained by using silver nitrate, tincture of iodine, and pyrodine. The constant relation between the temperature and the albumin could not be determined, and from these observations the author deduces that there is none. The albumin introduced into the body is probably not eliminated as such by the kidneys, but is taken up and converted into end products by the metabolism of the tissues.

THERAPEUTICS.

Treatment of Tetanus.

All suspicious wounds and all wounds in which the tetanus bacillus is known to exist should, according to D. Symmers (*American Medicine*, Aug. 15, 1903), be excised or the extremity amputated; if this be impracticable, the wound should be cleansed of all foreign substances and saturated with oxygen by means of hydrogen dioxide or the injection of pure oxygen gas, following which it should be flushed with boric acid or saline solution, which in turn should be followed by potassium permanganate or a five-per-cent solution of iodine trichloride; that no matter what local treatment is adopted, if the wound affect an extremity, care should be exercised in applying permanent carbolic dressings, or any other form of carbolic acid, lest gangrene develop; that in establishing drainage, moist iodoform gauze should be used whenever expedient; that impermeable dressings, dusting powders, and caustics should never be employed; and that such wounds should never be incised.

That subcutaneous injection of antitetanic serum should be given in every case in which the development of tetanus is more than a remote possibility.

That the use of blank cartridges, firecrackers, and similar creations should be more stringently regulated.

That in addition to the general management of a case of tetanus, the patient should receive subcutaneous injections of carbolic acid along the tracks of the great nerve trunks, the injections being commenced so soon as the diagnosis is made; that the body should be further fortified by the administration of the acid by the mouth or the rectum, or both; and finally, that the drug in every case should be pushed to its utmost physiologic limit.

That antitetanic serum should be combined with carbolic acid, and that if possible it should be given according to the method of

Jacob: Five or ten cubic centimeters of cerebrospinal fluid is withdrawn by means of a hollow needle cautiously inserted into the subarachnoid space between the second and third lumbar vertebræ, following which five cubic centimeters of antitetanic serum is allowed to flow slowly in under very gentle pressure; the foot of the bed is then elevated and allowed to remain so for at least half an hour. If this cannot be done, the serum should be administered subcutaneously frequently and in full doses, choosing by preference the track of the great nerve trunks, or inserting the needle near or even into the sheath of one or both of the sciatic nerves, in which event the patient should be kept under chloroform for a reasonable time in order that pressure against or stretching of the nerve sheath may not increase the number of convulsions or the degree of pain. In the intracerebral and subdural paths, opening upon dangerous ground and necessitating the performance of a major operation are available only in certain cases and under certain circumstances, and the ultimate object is attained with no more certainty than is assured by the subarachnoid method. The intravenous injection is the least rational of all because the antitoxin, going directly into the right heart, becomes aerated as it passes through the lesser circulation, and is thus deprived of at least some of its potency, an objection which Laplace tentatively directs against the subcutaneous employment of the serum, and which should apply with even greater force to the intravenous method. And lastly, absolute quiet should be maintained, and the use of carbolic acid, antitetanic serum, and the nervous sedatives be continued for several days after the complete subsidence of spasm.

Principles of Infant Feeding as Based on the Evolution of Mammals.

Henry D. Chapin (*Archives of Pediatrics*, July, 1903) says an infant undergoes three stages of development and nutrition—(*a*) preplacental, (*b*) placental, (*c*) mammary—and should be looked upon as attached to the mother in all three.

At the beginning of the mammary stage an infant has only the rudiments of a true stomach.

During the period of mammary development the mother first changes the character of the infant's nourishment from colostrum to milk, and then the infant's digestive secretions so change the character of the milk that as the digestive juices increase in quantity and strength, the work of digestion is not thereby lessened.

but rather increased, as the stronger the gastric juice becomes, the tougher the milk curds become, owing to the acid combining with the curds.

The milks of all animals will produce good tissue. They differ in composition according to the rate of growth of the young animals. Their proteids differ in accordance with the type of digestive tract they are to develop.

No known method of procedure will convert cow's milk into human milk. All methods of artificial feeding must have in view the production of food that will adapt itself to the developing digestive tract. All substances aside from breast milk are foreign to the infant's digestive tract, and may at times cause disturbance.

In artificial infant feeding, certain minimum quantities of digestible proteid, fat, carbohydrates, and mineral matter are needed. The mean composition of breast milk will serve as a general guide to the nutritive requirements of infants.

Milk must be the basis of an infant's food, not alone because it contains animal proteid, but because it contains the only available form of proteid that possesses the function of developing the digestive tract.

The proteid of cow's milk, which was intended to develop a calf's stomach to digest grass, must be modified or adapted to the infant's stomach. This may be done by chemically or mechanically altering the character of the curds, by diluting milk with either alkalies or gruels.

When for any reason a sufficient quantity of proteid of cow's milk cannot be given, it must be supplemented by other forms of nucleoalbumins until the normal quantity can be digested. It is a gross error to feed too low proteids of milk simply to overcome indigestion.

Abortive Treatment of Boils by Superheated Dry Air.

Nicolaus Reich (*Zeit. für diat. und phys. Therap.*, March, 1903) says the theoretical grounds for the treatment of boils by the application of heat are: (1) That heat is directly injurious to the pathogenic organisms involved; (2) that active hyperemia of the tissues, and consequently an increased resistance to bacterial invasion, is induced; and (3) that the skin is sterilized and reinfection rendered more difficult. A current of superheated dry air is an excellent method of applying heat to the skin, for the profuse sweating to which this form of heat gives rise prevents rapid increase of temperature in the deeper tissues. Reich states: (1) That no case in which the treatment was begun early went on to

suppuration or tissue necrosis; (2) that the infiltration of the tissues disappeared more quickly than is customary in abortive cases; (3) that reinfection of the tissue surrounding the boil never occurred; (4) that in cases of general infection the tendency to fresh boil formation was much diminished; (5) that the treatment in itself was scarcely painful, and the painful tension in the infiltrated tissue was much reduced after five minutes' sitting. Experience is still lacking as to the results of this treatment where a constitutional disease, as for example diabetes, underlies the formation of boils.

The Saliva as an Aid in the Treatment of Disease.

Bergmann (*Therapie der Gegenwart,* May, 1903) claims that there are four diseases in which the saliva may be utilized as an aid in the treatment thereof: (1) In inflammations of the throat: A gargle acts only as a cleansing fluid, having no curative influence on the lesion, whilst the saliva which is constantly being swallowed and thus passing over the whole inflamed area reduces the irritation. (2) Hyperacidity of the stomach: The abnormal increase of hydrochloric acid in the gastric juice cannot be neutralized by the usual alkali therapy; the alkali in the saliva, however, is able to combine with the acid and neutralize it. This end is obtained by having the patient masticate vigorously. (3) Obesity: By continued chewing and expectoration, thus reducing the quantity of water in the system and protecting the heart, a great reduction of weight may be brought about. (4) In effusions, by the same process, it is possible during the day to expectorate 400 to 1000 cubic centimeters of saliva. In four cases of exudative pleurisy salivation was beneficial.

Picric Acid in Gonorrhea.

F. Re (*Riforma Medica,* April 20, 1903) speaks favorably of the above drug in the treatment of gonorrhea. In the first place it is a powerful, speedy, and efficacious antiseptic, and in the doses used does not irritate the mucous membrane, does not cause scarring or abrasion of the epithelium. It readily insinuates itself into the tissues and lymphatic spaces. A careful bacteriological examination was made of the various cases under treatment. The drug was used in a water and glycerin solution, one-half to two per cent, and as ointment (vaselin and lanolin) one to two per cent. In acute cases the watery solution one-half per cent was used four times a day. In two cases some temporary edema of

the penis, with much itching and burning, followed the injection, but this inconvenience disappeared in twenty-four hours. Cure followed in from fifteen to twenty-five days. In the more chronic cases the author injected the ointment into the ureters. No complications followed this method of treatment. The author publishes twelve cases.

The Treatment of Enuresis Nocturna.

Kapsammer (*Wiener klin. Wochenschrift,* No. 30, 1903) calls attention to the difficulties of determining the etiology of enuresis and also of its treatment, and ascribes these to the lack of indications. He warns against the use of mechanical therapy such as massage and electricity; however, in the hysterical form he advises suggestion. Cathelin employs a ½-per-cent cocaine solution as an epidural injection, and the author has followed this method in thirty-seven cases, effecting a cure in twenty-five; he uses ¼- to ½-per-cent solutions, and in eight cases gained results after the first injection. The effect of these injections is probably due to the trauma inflicted on the sacral nerves, which acts reflexly on the central tonus of the internal sphincter, thus strengthening it. He has had no bad results from employing this method.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Double Optic Neuritis Complicating Whooping-cough.

Gamble (*Archives of Ophthalmology,* July, 1903) arrives at the following conclusions after studying the reports of three cases of optic neuritis complicating whooping-cough which he found in the literature, and also one case which occurred in his own practice:

1. Optic neuritis complicating whooping-cough seems to occur most frequently in girls (four cases all girls).
2. It occurs with or without cerebral complications.
3. Vision may or may not be disturbed.
4. Prognosis as to sight good when no cerebral complications exist.
5. Optic neuritis may result from direct action of toxins of pertussis upon the nerve head.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology,
Detroit College of Medicine.

Artificial Abortion (Monster); Calf with a Human Head—Made in Japan.

The accompanying illustration is that of a specimen brought to Russia from Japan by Commander F. W. Shidlovsky, of the Russian Voluntary Fleet. It is an anatomical preparation representing rare interest from the point of view of skilful mastership. The specimen was sold as an originally born calf with a human head; weight 1275 grammes, length 28 centimeters. Professor

Batuieff, who had his doubts as to the reality of this monster, commenced to search for signs of imitation, and it was not long before he discovered some well concealed thread and seams in the corners of the mouth, and also between the lips and tongue.

Further investigations have proved lumps of cotton-wool under the cheeks; on the ears wrinkles (folds) have been made by means of thread well hidden; and as a base for the nose a piece of wood, on which human skin for the entire face was stretched over, served the purpose.

The rather harsh changes of the partial forms of the facial head, and especially the nose, have been the defects of the imitation; but nevertheless, as a whole, it was so well done and the traces so well concealed, that also in this respect everybody could see the well known capabilities of art and technics of the Japs.—*Russki Wratch,* No. 29, July, 1903.

Sextuplets.

A certain degree of doubt has always attached itself to the records of sextuplet birth in the human subject; and as a matter of fact the medical man who reports the case has seldom been actually present at the confinement. In this respect the instance reported by Drs. J. W. Keer and Cookman (*Scottish Medical and Surgical Journal,* July, 1903) does not differ from the usual rule. The mother, a woman of the Gold Coast, was found lying exhausted in a hut, and six fetuses were found beside her. The infants were five boys and one girl; there were four placentas, of which one belonged to the girl, one to one of the five boys, and the other two to two boys each. It was said that labor lasted only four hours, and that each placenta was born after the children to whom it belonged. This was the woman's fourth pregnancy; in her first she had given birth to quadruplets, and in her second and third one to triplets in each instance. There had thus been the extraordinary obstetric output of sixteen children in four pregnancies. It may be added that all the six infants were dead before two days had elapsed.

The Conservative Treatment of Lesions of the Uterine Appendages.

G. G. Bantock (*Lancet,* July 25, 1903) says that in the course of an ovariotomy it is true conservative surgery to remove the second ovary if it shows palpable disease; that in the case of ectopic gestation or of salpingitis, either acute or chronic, it is advisable in the great majority of cases, if not in all, to do the double operation; that the practice of ignipuncture or partial resection of a suspected ovary is not founded on specific data; that it is not true conservative surgery to leave an ovary in cases of complete hysterectomy; and that the operation of salpingostomy does not appear to have any claim to be regarded as worthy of acceptance.

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ORIGINAL CONTRIBUTIONS.

CATARACT IN THE YOUNG.

BY WILLIAM CHEATHAM, LOUISVILLE, KENTUCKY.

Cataract takes its name from its resemblance in form to a large cascade; it is an opacity of the crystalline lens, or its capsule, and is classified as follows:

1. With reference to the age of the patient, as senile, juvenile, and congenital.

2. With reference to consistency, as hard and soft.

3. With reference to cause, as traumatic, idiopathic, and diabetic.

4. With reference to the stage of development, as incipient, mature, and hypermature.

5. With reference to extent, as complete or partial; this latter class being subdivided with reference to location of the opacity, as central, zonular, anterior polar, posterior polar, and capsular.

6. There is a variety, the dread of the operator, known as secondary, which is an opacity of the remaining portion of the capsule, found to exist or developing after the operation.

It is a question whether cataracts in the very young are not all congenital. Congenital cataracts may occur in one or both eyes. There is usually associated with congenital cataract some constitutional dyscrasia, such as rickets, and as a consequence there is frequently some disease of the fundus of the eye, as can be seen with the ophthalmoscope after the lens is removed; the cataractous lens is sometimes luxated, as a deficiency in the suspensory ligament exists; colobomas of the iris and lens, and other parts of the eye, are also likely to exist with congenital cataracts; the pupil will frequently respond to mydriatics very indifferently, and nystagmus often exists—all indicating possibly some malnutrition.

The main object of this paper is to put on record some

interesting cases of cataract in the young. The trouble frequently runs in families, and is hereditary. It may skip a generation. Anterior and posterior polar cataract, and lamellar or pyramidal cataract, are more common in the young. Anterior polar and posterior polar cataracts, I believe, are nearly always associated with some disease of the fundus. Zonular cataract is often associated with rachitic skulls and teeth.

According to V. Aix, out of 189 cases of zonular cataract sixty-six per cent had rachitic teeth. Arlt has pointed out the frequent association of hydrocephalic skull and infantile convulsions in these cases.

All specialists in diseases of the eye frequently see hereditary cataracts. Numerous cases of several children in one family with cataract have been reported. A gentleman in this city has recently been operated upon for cataract, whose grandfather, father, and brother also had it. A short time ago a family from Manhattan, Ohio, was brought to me. The father and mother were healthy; they have eight children, general health of all good; no eye trouble in relatives. All the children I saw were perfect specimens; all had trachoma, which of course complicated the surgery, but no harm resulted.

First child, a girl aged eighteen years; healthy; good vision.

Second child, a boy aged sixteen years; blind from cataract since age of six years; right eye looks as if an attempt at extraction had been made; pupil well drawn up and plugged with opaque lens matter; left eye has been needled once; thin membrane in field of pupil.

Third child, a girl aged fourteen years; vision good.

Fourth child, a boy aged twelve years; vision good.

Fifth child, a boy aged ten years; cataract since six years old.

Sixth child, a girl aged eight years; good vision.

Seventh child, a boy aged six years; cataract since five years old.

Eighth child, a boy aged three years; cataract since eighteen months old.

In this family there are three girls, all with good vision; five boys, four of them with cataract. The cataracts in these cases involved all the lens; they were very soft, and involved both eyes. They were all needled, the first boy the left eye only.

The history of the next family I shall mention is even more interesting, as one or both pupils and lenses were dislocated. The parents are cousins and are healthy. There are seven children.

First child, eyes normal.

Second child, eyes normal.

Third child, a boy, defective eyes.
Fourth child, eyes normal.
Fifth child, a girl, defective eyes.
Sixth child, eyes normal.
Seventh child, a boy, defective eyes.

The third child is a male aged twenty-three years; each pupil dislocated upward and outward, but round; iris tremulous; both lenses partially opaque and dislocated downward.

Fifth child, a girl aged sixteen years; right pupil dislocated upward and outward and oblong; left pupil central, responds very poorly to atropia; both lenses opaque and dislocated upward; iris tremulous; lenses waxy and very tough; had to needle six or seven times; two needles were used only twice.

Seventh child, a boy aged nine years; right pupil oblong, dislocated upward and outward; lenses opaque, and dislocated downward and inward; lenses very tough as in sister's case; had to needle six times; used two needles but twice; pupil responds poorly to atropia. Vision in each case of only 20/70 with correcting lenses was secured.

It will be observed that in these three cases, two of them had the right pupil dislocated upward and outward; the third with each pupil dislocated upward and outward; all of them with the lenses opaque or partially so, and ectopic; the older one with lenses dislocated downward, the second one with lenses dislocated upward, and the third with lenses dislocated downward and inward. I am sure one of them (I think the girl) had a coloboma of the right lens, but my record does not show it.

W. F. Norris, in his chapter on diseases of the lens in "System of Diseases of the Eye," by Norris and Oliver, says: "Congenitally displaced lenses are spoken of as misplaced lens or ectopia lentis, and displacement due to other causes as luxation or dislocation." He also says ectopia lentis is the result of a faulty development of the suspensory ligament, the lens being pulled toward where it is the strongest; he says the lenses are either displaced upward and inward, upward, or upward and outward, rarely or never downward. In one of my cases both lenses were dislocated downward; in one both lenses were dislocated upward; in another both lenses were dislocated downward and inward. Ectopia of the lens, Norris says, is hereditary.

Dixon and Marlin give the records of a family tracing this defect through five generations.

Mules cites a case of a father with ectopia of the lens, with ten children similarly affected.

Norris also speaks of corectopia, or displacement of the pupil, sometimes being associated with displacement of the lens.

SOME INTERESTING SURGICAL CASES.*

BY AP MORGAN VANCE, M.D., LOUISVILLE, KENTUCKY.

Thinking the clinical report of some of the every-day work of a general surgeon, with exhibition of specimens, might be of interest, I submit the following cases:

Case 1.—Mrs. D——, aged forty-four years, widow; occupation cook; mother of several children, the youngest twenty years old; a large and well nourished woman. She was taken suddenly ill with severe pain in abdomen followed by shock, and after reaction took place fever ran high. I saw her in the ward at Sts. Mary and Elizabeth Hospital one week after appearance of the first symptoms, Dr. Frank having attended her at her home previously. He had diagnosed some pelvic inflammation, probably a ruptured tube, and referred her to my service at the hospital.

With his assistance I opened the abdomen on July 1, 1901. On the left side was found a large, thick-walled pus-tube which had ruptured, and the resulting abscess was walled off by the intestines. This was enucleated and with difficulty removed. Search was then made for the right ovary and tube, and for a moment I was much puzzled, as I could locate neither. The incision was enlarged, for further inspection, and the uterus found pressed forward under the pubes, the true pelvis being occupied by an elastic and smooth tumor, which filled it. This tumor was adherent to everything adjacent, and when a point of cleavage was found it was enucleated with comparative ease. Rupture of the wall took place, and the abdomen was flooded with a quantity of oily material resembling thick pus. The tumor being thus reduced one-third in size it slipped out of the abdomen, with no sign of a pedicle or any evidence that one had been torn. No bleeding took place. The cavity of the abdomen was flushed with a large quantity of normal salt solution. Two large rubber-covered gauze drains were introduced in each pelvic fossa, and the incision closed with box sutures of silkworm-gut. At the end of forty-eight hours the drains were removed. Eight days later the stitches were taken out, and the woman made an uninterrupted recovery, leaving the hospital well July 27, 1901.

The tumor proved to be what I think is a dermoid cyst, with three distinct compartments, each filled with the peculiar fluid we find in dermoid cysts, but no hair was discovered. I present the growth.

*Read before the Louisville Medico-Chirurgical Society.

Case 2.—Mrs. B——, aged fifty-five years, a very large and strong woman, who had never been pregnant, gave a history of almost daily bleeding from the uterus for forty-five years, and there had been noticed an abdominal tumor for fifteen years. This tumor was round, hard, and movable from one side of the abdomen to the other.

Examination revealed a firm growth filling the pelvis completely, and the movable tumor already described above. The latter was thought to be a pedunculated fibroma springing from a fibroid uterus.

Upon opening the abdomen, from the pubes to one inch above the umbilicus, the movable growth proved to be a fibroid ovary quite as large as a cocoanut, which was removed and a hysterectomy performed, the uterine neck alone being left, the stump being dropped and the abdomen closed.

No unfavorable symptoms developed, and the woman returned to her home at the end of five weeks. The wound healed by primary union, closure being made in layers with very fine catgut. I present the specimens.

Case 3.—Mrs. B——, aged thirty-nine years, married, no children. She was rather frail and anemic, and gave the history of invalidism for two years. She came for relief from abdominal tumor, which upon examination proved to be a uterine fibroid, the size of a child's head, which rose well out of the pelvis and reached to the umbilicus. There was a history of only slightly increased bleeding each month, but there was great discomfort and weight, her general health evidently being affected.

An abdominal hysterectomy was done, the neck of the uterus only being left, and the same plan of treating the stump was followed as in Case 2, the incision being closed in layers with very fine catgut.

The woman had no trouble whatever, and left the infirmary at the end of three weeks in far better general condition than when she came. Wound healed primarily throughout. I present the specimen.

Case 4. — Mrs. K——, aged forty-nine years, mother of grown children, gave the history of backache, bearing-down pains for a number of years, and active uterine bleeding, more profuse every month, for two or three years, which she had hoped would stop when change of life was completed. Her general condition was very bad.

Examination revealed a large uterus, movable, with a ragged, irregular os. The patient explained this condition as following a severe and prolonged labor fifteen or sixteen years before.

I advised removal of the uterus by the vaginal method, being very suspicious of malignancy. This was done, with the assistance of Drs. Nettleroth, Rominger, and Lynch, at St. Joseph's Infirmary. Clamps were used, and the uterus had to be bisected before it could be delivered. The clamps were removed at the end of forty-eight hours. An active hemorrhage occurred from the right uterine artery within half an hour, which was controlled by Dr. Lynch, the house physician, by reapplying a hemostat, and this was left on forty-eight hours more. No further trouble was experienced, and the woman returned home at the end of five weeks from the date of the operation. Her health has been completely restored. Examination proved the growth, which I present, to be a myofibroma.

Case 5. — Mrs. S——, aged sixty years, mother of several children, was referred to me by Dr. Seitz with the history of active uterine hemorrhage and gradually declining health for twelve months.

Examination showed an enlarged but perfectly movable uterus. Diagnosis of uterine cancer was made, probably of the fundus, as no signs were present about the os. Vaginal hysterectomy was advised, with very guarded prognosis as to cure. This was done at St. Joseph's Infirmary with the assistance of Drs. Seitz, Nettleroth, Rominger, and Kincheloe. Two clamps on either side being fixed, the uterus was bisected and cut away.

Her recovery was uneventful, and she returned home during the third week after the operation. Within a few months pain in the left limb with progressive edema set in, and after living a year with the use of increasing doses of morphine, she died of exhaustion. No local return of the cancer was manifest, though I suppose the edema of the left limb was due to extension of the malignant process through the lymphatics. I present the uterus, which showed a cancer in the fundus encroaching upon the peritoneal covering.

Case 6. — Mrs. C——, aged thirty-one years, mother of one child, was seen with Drs. Bennett and Boggess October 8, 1901, in the ward at the Sts. Mary and Elizabeth Hospital. The history was that for more than a year she had suffered with pain and discomfort about the stomach and in the gall-bladder region. Since June she has had a number of attacks of colic, all the usual remedies having been tried without benefit. For three weeks she had vomited continuously whenever anything was taken into the stomach, even water being rejected. During this time more or less fever was present, and the pulse grew progressively weaker Dr. Boggess was called in consultation two days before I saw

her, when there was present a distinct enlargement of the liver, the liver dulness extending well down below the border of the ribs.

When I saw this patient at eleven o'clock on October 8, 1901, I found her pulse just perceptible at the wrist, temperature 101.5° F. in the rectum. There was no tumor or enlargement about the liver, but she was vomiting, and there was great tenderness over the gall-bladder region on deep pressure only. The woman, despite her feeble circulation, was bright, and to look at her she did not seem very sick.

I advised operation as the only chance of saving her life, and thought this very slim. She readily consented, and at 4 P.M. the same day, after she had taken 1/7 of strychinne, 1/50 nitroglycerin, and 1/125 digitalis verum in two hypodermics, and had received salt solution, coffee, and whiskey per rectum, I opened the abdomen well away from the ribs in the linea semilunaris, feeling sure I would find pus about gall-bladder with a pyloric obstruction from some cause. The pyloric end of the stomach was found doubled up and adherent to the liver. These adhesions were separated, and searching further for the gall-bladder my finger pushed into a cavity low down on the lower surface of the liver. This was an abscess containing thick pus and a number of small gall-stones. After protecting the general cavity with gauze the sac was cleaned and the stones removed, drainage both by gauze and tube being established. The woman never rallied and died twelve hours later, the tremendous medication of the morning failing to maintain its effect on the heart after the operation. As she went to the anesthesia room, however, she seemed in fair condition, Dr. Frazier, who gave the chloroform, remarking that I was unnecessarily alarmed.

Post-mortem revealed what had been diagnosed as probable, viz., a ruptured gall-bladder, perforation of the duodenum, and obstruction of the pylorus by adhesions. The specimen here presented shows the condition better than I can describe it. The gall-bladder is still filled with stones.

Case 7.—Miss G——, aged twenty-five years; referred to me by Dr. Reddish, of Somerset, Kentucky, June 26, 1901, with the history of trouble with her left knee for more than a year, great enlargement having occurred in the last two months.

The knee was found greatly enlarged, painful on movement, and gave evidences of complete disorganization of the joint. The general condition of the patient was very bad. A diagnosis that the condition was probably malignant was given, with the advice that after verification by exploration high amputation should be

performed. On June 27 this was done, a large central osteosarcoma of the lower end of femur being found. At the end of seven days the patient was returned to her home, the stump being healed, no infection whatever occurring. The specimen shows the condition.

Case 8. — Mr. P——, aged twenty years. There was a history of trouble with left knee for six or eight weeks. Diagnosis, subperiosteal sarcoma of lower end of the femur, and amputation at upper third of thigh advised, after exploration and verification by the microscope. This was done, and the patient returned to his home on the eighth day.

The specimen is interesting, shown with the preceding case, as illustrating another variety of malignant disease of bone.

Case 9.—Arthur V——, aged twelve years, referred to me by Dr. Murphy, of Salem, Indiana, October 1, 1901. The history was that four weeks before the boy was apparently well, when he suddenly began to complain of pain in his left hip. He was able to walk to the doctor's office, however, limping slightly. His temperature at this time was 103° F. Pain increased, and swelling rapidly occurred at the hip and extended down to the knee, fever going as high as 104° and 105° F., with rapid emaciation. The patient was brought to St. Joseph's Infirmary on the date above given.

Examination could not be thorough because of the great pain produced on movement; a large abscess of the upper part of the thigh could be made out, however, and the next morning he was anesthetized, with the understanding that whatever was found necessary would be done for his relief. To my surprise the hip-joint was found completely disorganized, and the femur actively diseased as far down as the middle. Four or five inches of the upper end was removed, the large abscess drained, and the child returned to bed with the wounds wide open for drainage, amputation at the hip being advised as soon as his condition of sepsis improved.

On September 6 I amputated at the hip, and report the case here to show how rapid is the destruction of bone in this form of acute osteomyelitis. Examination of the limb showed the diseased process had extended to the knee-joint.

The boy returned home three weeks after the first operation with the wound healed up to the drain into the acetabulum, though the whole area was bathed in pus at the time of the amputation and the thigh was full of edema. The necrotic and infected tissue lining the cavity from which the bone came was cut away, and

douching with normal salt solution used, both gauze and drains being inserted.

DISCUSSION.

Dr. H. H. Grant: This is a very interesting and instructive array of specimens. The histories are given so completely that I do not see anything left to say, except that as all the operations appear to have been successful but one the report is highly encouraging. All of them seem to have been authorized by results, the diagnosis in the most of them being correct.

The history of the last case, rapid destruction of the hip-joint by osteomyelitis, constitutes an important and instructive point in the diagnosis, inasmuch as it emphasizes the necessity of early recognition of these conditions. Osteomyelitis is rapidly progressive, and unless the character of the lesion is quickly recognized the disease in many instances destroys life and limb.

Dr. W. O. Roberts: In case of the dermoid cyst, I understood Dr. Vance to say that one of these cysts ruptured during the operation. If this be true he is to be congratulated upon recovery of the patient, because the rupture of one of these cysts, the contents escaping into the abdominal cavity, is exceedingly dangerous. I do not believe I have ever seen an instance in which the cyst ruptured, with escape of its contents into the cavity, where the patient recovered.

In regard to the case of sarcoma of the lower end of the femur, I believe it is always safer in case of sarcoma of bone to remove the entire bone. In this instance it would probably have been better for the patient if the doctor had done an amputation at the hip.

Dr. Louis Frank: The first case Dr. Vance reported was one which I had seen and referred to him. I would call attention, in mentioning this case, to a discussion before this society some time ago, at which time I believe Dr. Vance stated he had never seen a case of ruptured pus-tube that had recovered. At that meeting there were several cases reported where rupture had taken place and the patients had recovered. This condition had occurred in the case reported by Dr. Vance to-night. I have seen several of them in which I was able to make the diagnosis before the operation. Some of them have died, some have recovered.

The fibroid tumor of the ovary is an exceedingly interesting and rare specimen; very few such cases have been reported. One, a very large tumor, has been reported as removed by Dr. Schachner of this city. The fact that this tumor is undergoing cystic degeneration makes it still more interesting.

Ruptured gall-bladder: This specimen is also interesting, but such cases are not so rare as we have been led to believe. I am inclined to think, not alone from personal observation, but from a study of the literature of the subject, that there are probably more of these cases than we suspect. Rupture may occur into the peritoneal pouch, which has been so well described by Robson, between the kidney, colon, liver, and posterior wall, which holds a considerable quantity of fluid, without giving rise to general peritonitis; adhesions occur, and later there is a secondary rupture into the stomach, colon, or duodenum. Probably in the case reported rupture first occurred of the gall-bladder proper, then there was a secondary rupture into the stomach, or about at the juncture of the duodenum and the stomach.

Fibroid tumor of the uterus: This case illustrates how much trouble may sometimes be produced by small tumors, and emphasizes the fact that we should operate in these cases not alone for the size of the tumor, but rather for the symptoms which are produced. Here is a small tumor which caused no symptoms otherwise than hemorrhage, but where operation was indicated because of the hemorrhage produced.

Cancer of the uterus: This is an interesting case from the fact that this cancer occurred in the body of the uterus, and that there had been so little development of the tumor itself, yet death resulted from exhaustion following the operation, presumably exhaustion due to cancerous cachexia which occurred. These tumors sometimes attain a large size without involvement of the peritoneum.

Dr. Turner Anderson: Bearing upon the point made by Dr. Roberts in regard to the fluid contained in dermoid cysts, Montgomery states that it is exceedingly poisonous, and that the greatest care should be taken to avoid rupture of a dermoid during the operation. You will remember a large multilocular dermoid cyst which I presented to this society some months ago, containing teeth, bone, hair, etc. It was an enormous cyst, containing all the characteristics of dermoid; this cyst was ruptured during the operation, the liquid it contained was creamy and had somewhat the appearance of thick pus. Notwithstanding the fact that the cyst ruptured the patient made a good recovery.

Dr. Louis Frank: I do not see why dermoid cysts should be more septic than others, unless infection has occurred, just as might occur in any other form of cyst. One peculiarity about this specimen that I had intended to mention is the fact of there being three distinct sacs or compartments, each of these compartments containing dermoid material. There is a distinct partition

between each of these sacs, which I believe is rather unusual in dermoid cysts.

Dr. B. C. Frazier: In the sixth case reported by Dr. Vance (ruptured gall-bladder), both Dr. Vance and Dr. Boggess warned me before beginning the anesthetic that the woman was in a dangerous condition, and it was questionable whether it would be safe to give the anesthetic. I found her in the ward at the Sts. Mary and Elizabeth Hospital, and after an examination did not consider that she was in a bad condition; her pulse was 116, she seemed bright, the character of her expression did not lead me to think she was so desperately ill as they had stated. She felt a little nervous about the operation, and especially about the anesthetic; she said she did not mind the operation, but was afraid of chloroform. I had very little trouble in giving her the anesthetic; she took it well, and apparently there was but little shock during the operation. Her pulse maintained its character both as to volume and rapidity, and when she was put to bed she seemed to be in good condition. However, she never rallied and died in about twelve hours.

The case of osteomyelitis is very interesting, in that the diagnosis was made before the operation, and the fact that there was such a large amount of edema both above and below the knee. The case was rather puzzling on account of this edema. The destruction of bone was something remarkable to have taken place in so short a time — four weeks.

Dr. A. M. Vance: In operating upon a young person for sarcoma of the leg, it is always a question well worthy of our consideration whether we shall leave a sufficient stump to enable them to wear an artificial leg, or whether we shall deprive them of this benefit for the little difference in the prognosis and amputate at the hip. I consider the difference in prognosis to be very small, and in this case amputated about four inches below the hip-joint. If there is a chance of the disease recurring in the end of the bone, it will probably recur in the stump, and we still have recourse to hip-joint amputation. There being but little difference in the prognosis under these circumstances, I am in the habit of giving the patient the benefit of the doubt and leaving a sufficient stump so an artificial leg can be worn. I may say that this patient returned to the city a week ago to have an artificial leg made; she is perfectly well, looks better than she has for a long time, with no sign of a recurrence of the growth. Of course it is entirely too soon to state what the ultimate result will be.

EXOSTOSIS OF THE ORBIT, WITH REPORT OF A CASE.*

BY D. C. BOWEN, M.D., NOLIN, KENTUCKY.

The slight attention paid to this subject by the general practitioner is probably due to lack of information as to the proper method and value of treatment, the scarcity of literature upon the question in modern text-books, and disinclination to assume the burden of responsibility—which we are anxious to shift to our brother specialist.

Exostosis is defined as being a circumscribed tumor consisting of newly formed osseous matter, and is recognized in three varieties, described by Mackenzie as follows: (1) Cellular; (2) craggy; and (3) ivory.

The cellular form grows from the periosteum. It is not preceded by cartilage, seldom acquires large size, and often ceases to grow.

The craggy growth is not common. It may develop from the canelli, or from the periosteum; it is enveloped by a cartilaginous substance; the periosteum is imperfectly developed and is recognized with difficulty. The center of this form of tumor is usually bone, but is sometimes cartilage.

The ivory exostosis is exceedingly dense, and of high specific gravity. In composition it differs little from ordinary bone; it originates in the diploe, pressing the compact tissue of the bone before it, and forms a round, smooth tumor. This is the most frequent form of exostosis affecting the orbit, and has a tendency at the same time to invade the cavity of the cranium.

Exostosis of ivory formation usually grows from the flat bones, consequently the orbital region is one of its favorite sites. Chemically it contains more phosphate, less carbonate of lime, the portion of animal matter also being small. Such tumors never grow very large, and do not produce much inconvenience, unless by projecting into and compressing important structures. Clogent relates a case where an ivory exostosis growing from the pubis perforated the bladder.

Ivory exostoses are frequently found projecting into the orbit, producing exophthalmos, double vision, amaurosis, and sometimes gangrene; but it is remarkable how much an eye may be protruded and displaced by an exostosis and yet vision be retained.

It is oftentimes impossible to (prior to operative intervention)

*Read before the Kentucky State Medical Association, Louisville, 1903.

differentiate exostosis of the orbit from other pathological conditions, such as encysted and other tumors, fungus of the maxillary sinus, etc.

The etiology of exostosis is obscure, and may depend upon syphilis, tuberculosis, contusions, fractures of the orbit, etc.

The treatment resolves itself into medicinal and surgical, according to cause. The writer hopes to elicit discussion on this important and much neglected subject by reporting the following case:

Lucy C——, aged twenty-four years; white; single; family history excellent. While witnessing a game of baseball four years ago she was accidentally struck a blow on the supraorbital region, by the bat slipping from the grasp of one of the players, which rendered her unconscious for a short time. She recovered, and no further thought was given the accident until one year later, when she felt slight discomfort about the eye and consulted an oculist, who prescribed an eye-wash locally and syrup of the iodide of iron internally. The patient continued under the care of this gentleman for about two years. Exophthalmos was plainly to be observed eighteen months after the injury. The pain which she suffered was slight until three months previous to the operation, when it became severe. Double vision was complained of for nearly two years prior to the removal of the tumor. However, as pain and discomfort had been slight, save that caused by diplopia, nothing further was done until the growth had reached an immense size, the diameters of which, as you will observe by the specimen herewith presented, measure one and a half inches by two inches. The tumor weighed when first removed two ounces, and in the dry state weighs one and a half ounces; several pieces were lost at the time of the operation, estimated at one-fourth ounce, making total weight in the dry state of one and three-fourths ounces.

This tumor was covered by a membrane, and was attached to the orbital plate of the frontal bone by a broad triangular base, whose sides measured about seven-eighths of an inch; it extended down to the extreme angle of the bone, or apex of the orbit, at the juncture of the frontal with the sphenoid, and developed by growing upward and outward, occupying all the available space, pressing upon the tissues in all directions, but less upon the floor of the orbit. The lacrimal fossa was completely filled, and pressure was so great that the eyebrow was considerably elevated; the margin protruded beneath the external segment of the supraorbital arch, and was plainly perceptible by inspection and palpation through the lid. The inferior margin of the tumor pressed

upon the globe of the eye, thrusting it downward and outward, causing it to protrude about half an inch beyond its fellow, thereby lessening vision and causing conjunctivitis and pain. She was unable to close the lids.

There was no doubt in my mind as to the true nature of the tumor; its hardness, immovability, slow development, continuity with the bone, slight pain and inflammation, its existence for so long a period, were all significant. My diagnosis of an osseous tumor of the orbit was confirmed by my friend, Dr. J. M. Ray, of Louisville.

On May 3, 1902, after the strictest precautions in the minutest details of preparing the patient, the room, the instruments and dressings, chloroform having been administered, the eyebrow shaved, and the operative field surgically cleansed, I made an incision from the internal to the external angular process of the frontal bone, midway between the supraciliary ridge and supra-orbital arch, cutting through the integuments, the orbicularis muscle, and palpebral fascia; the dissection was then continued into the orbit and around the tumor, freeing the latter from the soft parts; with the head of the patient resting in the hands of an assistant to prevent contusion, I applied a small thin chisel and mallet to the tumor at the most accessible parts, hoping to remove it piecemeal, thereby saving the globe. By hard strokes with a rawhide mallet upon the chisel applied to the tumor in its transverse diameter, I cut away about one-sixth of the mass. After removing this portion and examining the remainder it was found loose, but I was unable to remove it with forceps; the force applied is well illustrated by the impression of the forceps as shown in the specimen.

I now abandoned hope of saving the globe of the eye, as the trauma necessary was certain to destroy vision, and possibly cause gangrene of the soft parts. On making a transverse incision one-half inch in length from the external angle of the lid, the eyeball popped out from beneath the lid and was enucleated with ease. This afforded more space, and I was able to apply the chisel to the base of the tumor, and after some effort succeeded in freeing, or rather in fracturing, that part of the frontal bone from which the growth sprang, an accident which I had endeavored to avoid. With forceps well applied it took all the force I could bring to bear to dislodge the remainder of the tumor from its bed.

The wound was cleansed and dressed in the usual manner and healed by first intention. The patient made an uneventful recovery, without fever, and was sitting up on the sixth day. There was no pus nor meningocele observed through the aperture of the

triangular space caused by removal of the fractured plate of the frontal bone, which was sufficient in size to admit the introduction of my index-finger to examine the edges of the bone and also to satisfy myself that I had not injured the anterior portion of the brain or its membranes.

Microscopical examination of the growth reveals bone corpuscles, canaliculi, and a rudimentary blood supply of the spongy portion near the attachment. Otherwise the examination shows nothing of interest.

Attention is called first to the size of the tumor, and secondly to the fact that there has not been an untoward symptom notwithstanding the removal of so much of the orbital plate of the frontal bone.

H. M. Bracken, secretary of the Minnesota State Board of Health, said recently in an address to the National Association of Funeral Directors that health officers are vitally interested in one branch of the work of funeral directors—the preparation of bodies for shipment. In this country until about 1896 but little attention was given to this very important subject, but about that time the State and provincial boards of health, the National Association of Funeral Directors, and the American Association of General Baggage Agents began to work in harmony, and in 1897 uniform rules were adopted. These rules were amended in 1902. Minnesota and Iowa were the first States to adopt regulations for the preparation of bodies for shipment. There are now 285 licensed embalmers in this State, and no person who is not properly licensed may prepare a body for shipment. In this paper Dr. Bracken took the ground that no person should be licensed in any State as an embalmer except upon a thorough examination as to his knowledge and fitness to perform the work in a thoroughly sanitary manner. He referred to a complaint recently received from Ohio that an undertaker's assistant of that State had contracted erysipelas from contact with the body of a man who had died of that disease in Minnesota, and had been shipped to Ohio under a certificate that it had been thoroughly embalmed. Dr. Bracken said that had the work of embalming been properly done there could have been no infection, and under the circumstances he believed the trouble to have been due partly to the embalming fluid used. He placed some emphasis upon the importance of securing proper fluid.—*New York Medical Journal.*

THE MEDICAL AGE.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE ALIMENTARY REGIME OF DIABETES.

When it is recognized that the clinical manifestations of diabetes are due to the presence of sugar in the blood, one of the first indications in treatment is to lessen the formation of this substance in the organism. Lorand, of Carlsbad, has recently given concise study to this question and contends that the dietetic régime must conform to certain definite principles.

The first rule of importance is not to introduce into the organism highly glycogenic substances. This does not mean the complete suppression of starch or sugar foods. This suppression must be modified by consideration of another principle, that of basing the diabetic régime on the personal equation of the patient. A simple way to proceed is to allow the patient for three days to take his usual glycogenic food. The quantity of carbohydrate is to be exactly weighed, and the total quantity of sugar eliminated carefully estimated. A comparison of these two results will indicate the limit of the organism's tolerance to carbohydrate. In other words, this observation will show how much carbohydrate can be administered without any being eliminated as sugar. If the quantity eliminated exceed the carbohydrate ingested—that is to say, if the diabetic produces sugar on a nitrogenous diet—the conditions are naturally grave and restriction of the albuminoid intake may be called for, as it must be remembered that in 100 grammes of albuminoid 40 grammes of sugar are contained. In this way can also be observed marked idiosyncrasies on the part of the patient to certain foods. Most unexpected modifications of the dietetic régime result from these observations.

Another important dietetic principle is involved in the rule that the régime instituted must be nourishing enough to maintain in equilibrium the organic exchanges. Hypernutrition must

be avoided as much as malnutrition. With this point in view, three factors serve as guides—the weekly examination of the weight, systematic urological examination, and attention to certain calorimetric considerations. It may be said that an individual usually expends 30 to 35 calories per kilogramme weight. The caloric expenditure for a man of 75 kilogrammes should therefore be 2625 calories. Manifestly, if he is eliminating 100 grammes of sugar having a caloric value of 4, he is receiving 400 calories in excess of his requirements. The diet should therefore be instituted with the following facts in view: One gramme of fat gives nine calories, one gramme of alcohol seven, one gramme of sugar or albuminoid four. It is of course unnecessary to add that the dietetic régime must always be subordinated to the digestive conditions of the patient. The foods taken can be far more varied than they were formerly, if strict regard be given to the quantitative factors in each case.

EDITORIAL NOTES.

Diphtheria Spread by Lead-pencils.

That the practice which exists in a great many of the public schools in this country of using the same books and pencils from year to year until worn out is a dangerous one is shown by the report of a medical inspector in the city of Paris. An epidemic of diphtheria among schoolchildren in a certain district of that city was spread by pencils. These pencils, which were municipal property, were in certain schools distributed in the morning and collected at night. The common practice among children of holding their pencils in their mouths while at work shows how easy it is for the disease to spread. This is a matter that ought to be brought to the attention of our school authorities.

The New Insanity Law.

Among the several "immediate effect acts" to which the last legislature gave birth is one designed to group under one act the union asylums and the sundry laws pertaining to their management, the admission of patients, the manner of their commitment, discharge, etc. "This act shall be known as the insanity law," and it is one with which medical men generally should familiarize themselves, since some changes from former methods of procedure have been made.

Patients are divided into three classes, public, private, and voluntary, the former classes of pauper and indigent patients being done away with. Voluntary patients are such as are "not insane and are kept and maintained without expense to the State," but no patient of this class shall be kept or received in any public asylum so long as there may be application for admission of patients of any other class. There are occasionally most worthy patients, who appreciate the value of asylum environment at the time of mild or persistent depression or excitement, who gladly will avail themselves of asylum privileges without process of law, and for such the new class provides. A careful reading of the new law is commended to physicians generally.

Fire-escapes and Tuberculosis.

The suggestion recently made by Dr. Alfred Meyer, of New York, to utilize the fire-escapes of tenement buildings in that city for the outdoor treatment of consumption is an excellent one. The tuberculous poor would thus have the benefit of fresh air without being put to the expense of leaving their homes. While the air in the streets of tenement districts is not to be compared to that of the country, it is certainly far superior to that which the patient would be compelled to breathe in a small room of a tenement house. The objection that might be raised that the use of fire-escapes for such purposes would be dangerous in case of fire is not an important one, for in such an event the patient would be the first to escape.

The Study of Forensic Medicine.

The disrepute into which medical expert testimony has fallen in France has caused the French Minister of Public Instruction to issue a decree for the establishment of an Institute of Forensic Medicine and Psychiatry in Paris. The institute, which is intended to provide special training and to grant a special diploma to those who wish to practice as expert medical witnesses in the law courts, will be under the direction of the dean of the Medical Faculty and the professors of forensic medicine and of phychological medicine. It is to be hoped the time is not far distant when similar training may be obtainable in this country, as at present the judges of our courts place little or no reliance on so-called expert testimony.

ITEMS AND NOTES.

NEWSPAPERS report the birth of a 25-pound female child to a woman in Lexington, Ky.

IT is reported that the opium habit among the Filipinos is reaching large proportions.

THE German Reichstag has appropriated $20,000 for a test of the methods of Koch against typhoid.

MUCH concern is felt over the wide extent of the epidemic of yellow fever on the Gulf coast of Mexico.

THE high infantile mortality in Bombay and Bengal is attracting the attention of the sanitary authorities.

ST. LOUIS reports for the four months from April to July inclusive 444 cases of typhoid fever with 74 deaths.

IT is reported that four cases of foot-and-mouth disease were recently discovered in a herd of cattle at Wakefield, Mass.

THE new hospital for Kansas City, Mo., to be erected at a cost of not less than $400,000, will probably be on the cottage plan.

DURING 1902 the death-rate for the city of New York, 19.74 per thousand, is considerably the lowest ever reported in that city.

THE Marine Hospital Service has been informed of the appearance of three cases of bubonic plague at Sequeros and three cases at Bagio, Mexico.

THE Czech Society of Hygiene offers a prize of 200 crowns for the best essay on the evil effects of tobacco, especially in the form of cigarettes.

DR. JOSEPH M. MATHEWS, Louisville, has resigned from the faculty of the Hospital College of Medicine, and will devote himself to private practice.

THE heaviest man in Germany, probably in the whole world, is Hans Fromm, a hotel proprietor at Willenberg, West Prussia, whose weight is 502 pounds.

The Institute of Medical Women which was opened two or three years ago in St. Petersburg has recently conferred diplomas on several students for the first time.

At the recent medical licensing examination in Pennsylvania, of 392 applicants, one was expelled for drinking, two withdrew on account of illness, and fifty-one failed to pass the examination.

The thirty-sixth annual meeting of the Canadian Medical Association was held in London, Ont., on August 25, 26, 27, and 28, under the presidency of Dr. R. H. Morehouse, of London.

Dr. Augustus Pohlman, instructor in anatomy in the medical department at Cornell University, has resigned to accept an assistant professorship in anatomy in Johns Hopkins University.

Dr. James C. Culbertson, Cincinnati, editor of the *Lancet-Clinic* and member of the board of education, has given his medical library of over four hundred bound volumes to the City Hospital medical library.

The new German Reichstag will contain seven medical members, including Drs. Mugdan of Berlin, Leonhart of Kiel, and Ruegensburg of Bonn. All but two were elected by different political parties.

Reports from Constantinople say that seven hundred medical and veterinary students have received their diplomas and commissions without having passed the usual examinations, and have been drafted into the Turkish army.—*Exchange.*

Dr. T. Barthelemy, physician to Saint-Lazare in Paris and formerly chief of clinic at the Hospital Saint-Louis, has begun the publication of a monthly journal, *La Syphilis,* which will be devoted exclusively to the study of the disease designated by its title.

The New Hampshire legislature at its last meeting so amended the medical practice act as to require that physicians who practice at summer hotels in that State during the summer months must pass an examination before the State Board of Medical Examiners.

Dr. Barnet, the acting chief of the Havana Sanitary Department, announces that only three cases of yellow fever have entered Havana harbor this year. Of the three fever-stricken persons, all of whom came from Mexican ports, one died and another was discharged as cured.

Dr. Edward Martin, director of Charities and Public Health of Philadelphia, has organized a series of lectures by a dozen or more physicians, to be delivered to mothers in the congested districts on the care of children particularly, but discussing also other hygienic matters.

The Brussels Académie de Médecine has awarded to Dr. G. Joannovics, assistant at the Vienna Institute for General and Experimental Pathology, the prize of $200 offered for the best work based on new experimental researches. His subject was "The Pathogenesis of Icterus."

It is reported that a new field of work for the blind is to be opened by a London institute for massage. This is claimed not to be an experiment, as it has been proved that the blind can become experts in massage, which in Japan is recognized as a part of their work. The London project only awaits necessary funds.—*Exchange.*

At Colorado Springs the mistake of a druggist in substituting strychnine for calomel in a prescription caused the death of a three-year-old child. The dose threw the child into convulsions, and before medical aid could be secured she died. The druggist admits that by mistake he took the drug from the wrong jar.—*Exchange.*

The St. Louis Transit Company has begun a scientific investigation of the sweepings from street-cars to discover a means of keeping the cars sanitarily clean. Bacteriologist Stolpher has submitted a report showing that as the result of his examinations of car sweepings for a week all the cars contained tetanus and tuberculosis bacilli.—*Exchange.*

A young surgeon in Brooklyn has just recovered from an operation for appendicitis performed by his own father. This unusual occurrence took place, it is said, at the urgent solicitation of the sick son, whose confidence in the superior skill of his parent—a confidence shared by many others—was thus happily justified.—*New York Medical Journal.*

Sam Lewis, the most famous and most fashionable usurer in England in the past generation, who died two years ago leaving a fortune of £2,500,000, bequeathed over £1,500,000 to charitable and other public uses, including £400,000 for dwellings for the poor in any part of England that the trustees may select, and £100,000 for the Jewish Hospital.—*Exchange.*

Dr. Griffiths, president of the British Medical Association, at the last meeting of that body stated in his address that over 60,000 lives were sacrificed annually in Great Britain that could be preserved by seven moderate improvements in the sanitary law. This loss is largely among children under one year of age, and, along with the diminished birth-rate, presents ugly facts that are discreditable to the country and to modern civilization.—*Exchange.*

The examination of applicants for registration in medicine recently held in Massachusetts is said to have demanded the largest committee room in the State House, owing to the fact that upward of two hundred persons applied for the examination. Five examinations for several years past have been given annually, but it is likely that this number will be increased with the increasing number of applicants.—*Boston Medical and Surgical Journal.*

The death from starvation of Mrs. Edith White, a dentist, is reported from Alaska. She was a graduate of the dental department of the Minnesota State University, and was a practicing dentist in Dawson City for some years. She started from that place to go into the interior, and nothing more was heard of her until her body was found on the banks of Copper River. With the body was found a diary in which the starving woman had recorded her sufferings.

There was a death recently from smallpox in a small hamlet in West Virginia, twenty miles south of the Guyandotte River. The body was conveyed in a farm wagon at midnight to the burial ground. The mourners became intoxicated, and during their orgy the coffin was broken and the body precipitated over an embankment thirty feet in height. The drunken men were afraid to touch the remains, which were exposed for several days before the town authorities buried them.—*New York Medical Journal.*

It appears that down in Texas a farmer of Collins county brought suit against the Houston and Texas Central Railroad for so injuring his horses with a train that they died, says *American Medicine.* The testimony was considered, and it seemed that the plaintiff would win his contention, but when he went on the stand in his own behalf and was asked what treatment he had given them, he answered that he had given them the Christian science treatment. The jury at once returned a verdict in favor of the railroad company.

The First German Total Abstinence Congress was opened August 8, with simultaneous subsidiary societies of teachers, women, clergymen, etc. The Berlin correspondent of the *Münchener med. Woch.* notes that there are no special branches of total abstaining physicians, and rather offers his congratulations that the number of abstainers among German students is something hardly more than one-tenth of one per cent. Nevertheless, he states that at the same time with the Total Abstinence Congress a general meeting of the world-wide Good Templars' Order was held, which in Germany at the present time has some 625 lodges with almost 20,000 members, and has in late years added nearly 4000 to its membership.—*Journal of the American Medical Association.*

The following were the findings of the autopsy made on the body of Leo XIII. by Dr. Giuseppe Lapponi on the afternoon of July 21. After the injection of five liters of a special preserving fluid the abdomen was opened and the bladder and intestines extracted. They were found to be perfectly healthy. The spleen and kidneys were also absolutely normal. In the latter the cortical substance was well preserved and of a pale pink color. After the thorax was opened it was found that the heart, the aorta, and the carotid arteries were healthy, except that in the arch of the aorta was found an atheromatous patch. Nothing unusual was found in the pericardium. The pleura on the left side was quite normal, but on the right side the pleural cavity was full of liquid of an orange yellow color above and bloody at the bottom, with a large clot of fibrin. More fibrin was on the free surface of the costal pleura, but this was easily detached, allowing a view of the serous surface. The upper part of the right lung was quite normal, but the lower part was somewhat hard and crepitated when compressed, and from the cut surface a whitish, frothy liquid oozed out. The inferior lobe had partly adhered to the wall of the thorax, and when this was cut a dirty white, abundant liquid, without gas, oozed out, showing complete hepatization. The anatomical diagnosis made by all the doctors present at the autopsy was that of gray hepatization of the right inferior pulmonary lobe, with much pleuritic liquid of a serous fibrinous character, partly hemorrhagic, thus confirming the clinical diagnosis.—*Medical Record.*

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Technique of Maxillary Antrum Operations.

H. H. Curtis (*American Medicine,* Aug. 28, 1903) says that the first thing is to determine whether a second bicuspid tooth or molar is the cause of the disease, and whether the discharge is acute or chronic. Irrigations through the natural orifices should be given trial. If the natural orifice cannot be used, and a tooth is suspected as the cause, then a tooth should be sacrificed, and the opening utilized for the irrigation. It is quite easy to make obturators of varying shapes out of gutta-percha. A sheet of gutta-percha is dipped in boiling water, wrapped around a pencil, and after having been properly shaped, held in cold water until hard. An excellent irrigating fluid is composed of iodine one drachm, pyrogallic acid one-half drachm, and a saturated solution of boric acid sufficient to make a quart. The alveolar puncture is made for inspection, not for drainage. If the tooth is not suspected, other modes of entrance should be sought. Too many specialists are content with making an opening in the canine fossa, and then employing irrigation. In acute cases this might prove sufficient, but in more chronic ones it is absolutely necessary to inspect and explore thoroughly with the object of determining the exact pathologic condition present.

When a radical operation has been decided upon the patient should be told that the length of time consumed in effecting a cure was very problematic, but after a short time he would be comfortable and could attend to much of the treatment himself. The periosteum should be divided and turned back, and a chisel used to enter the antrum. The opening should be made sufficiently large to allow of the entrance of the bone forceps, and with the latter instrument the fenestration is completed. Strong carbolic acid and alcohol should be successively applied. The cavity can be still further cleansed by means of hydrogen dioxide followed by normal solution. A gauze packing is then employed. After the granulation process has become well established, worsted should be substituted for the gauze, because it can be introduced through a smaller opening. After from two to four weeks the worsted packing can be stopped and the peg inserted. This method is capable of giving good results, but often fails. A better

operation is that in which after making the fenestration as already described an opening is made into the nasal fossa. The larger the nasal orifice, the better will be the result. After the bleeding has been arrested the antrum is lightly packed with gauze or wool, and the wound in the canine fossa closed by two or three sutures. The packing should be removed preferably under anesthesia, and if there is a foul discharge, the antrum should be washed out. The opening in the canine fossa need not be so large in this operation as in the preceding operation. The operation through the inferior meatus is advantageous because it requires no anesthesia. It is therefore particularly applicable to patients who are not good subjects for anesthesia. With the electric trephine the anterior third of the inferior turbinate should be removed, and the perforation made about a quarter of an inch above the nasal floor. The fenestration should be made very smoothly.

Abdominal Pain in Pleurisy and Pneumonia.

J. B. Herrick (*Journal of the American Medical Association,* Aug. 29, 1903) says cases may occur in which at first it may be impossible to say whether the trouble is abdominal or thoracic. Each case must be judged on its own merits, and the decision as to immediate operation or waiting not settled by any hard or fast rule. Certainly in some doubtful cases with threatening abdominal symptoms it would be better to err on the side of operation and make a laparotomy than to let a possible ruptured appendix, gall-bladder, stomach, or intestine go untreated for six or twelve hours. An exploratory abdominal incision could, perhaps, be made under local anesthesia or under laughing-gas. This would avoid the danger of adding bronchitis or aspiration pneumonia to an already existing pulmonary inflammation if such happened to be the primary trouble and the peritoneum is found normal. If peritoneal trouble is found ether or chloroform anesthesia can be added, and the reparative surgical procedure instituted.

But with care and circumspection doubt will seldom arise. The main safeguard in the diagnosis is to think of the possibility of a thoracic origin for the abdominal symptoms. It will then be generally found that there is some thoracic pain, as well as abdominal, or there will be cough or expiratory grunt, perhaps a bloody or rusty expectoration, or the respiration will be increased out of all proportion to the abdominal pain and tympany, or, as in Barnard's case, the temperature will rise too suddenly and too high for the supposed abdominal accident. These facts, if observed, will lead one to a careful examination of the chest.

which will in most cases, even early, reveal some loss of motion, friction, râle, dulness, or bronchial breathing that discloses the existence of an intrathoracic inflammatory condition, and makes it clear that the abdominal pain is a reflected one. The abdomen in these cases is often pseudo-tender; a light touch hurts. Quiet, steady, deep palpation with the flat hand does not increase the pain. And, as Barnard observes, at the beginning of inspiration there is a yielding of the abdominal wall that is seldom seen in true peritonitis. With care, then, most of these cases can be recognized.

Fracture of the Patella.

H. Baerlocher has published (*Lancet*, Aug. 15, 1903) an account of twenty-eight cases of fracture of the patella treated at the Cantonal Hospital St. Gall, Switzerland, from 1889 to 1902 by the same surgeon, Dr. Feurer. As regards etiology only one case could be proved to be due solely to muscular effort; in all the other cases there was a direct traumatic cause. There were two severe cases of compound fracture, and seven of comminuted fracture (Splitterbruch), but the majority were cases of simple subcutaneous transverse fracture. The operation was with one exception always performed within forty-eight hours after admission to the hospital. A longitudinal incision was made over the patella. The fractured ends of the bone were never found in apposition; they were often tilted, and in almost all the cases remnants of ruptured fascia or periosteum were found interposed between them. This amply explains the rare occurrence of bony union when fracture of the patella has been treated without operation. The joint having been sponged and carefully cleansed with sterilized material (Tupter), the fragments were united by sutures passed through the ruptured capsule and by parosteal, never by osteal, sutures. The leg was immobilized for an average of four weeks (from nineteen to thirty-four days); active and passive movements were then commenced, together with faradization of the muscles of the leg. In less than five weeks (from twenty-two to forty-two days) the patient got up and walked about. Twenty of these twenty-eight cases regained their normal condition. Two patients died from delirium tremens, one was discharged with ankylosis, and five had slighter complications. Dr. Baerlocher saw twenty of these twenty-eight cases, and took skiagrams of some of them. All these patients had practically useful limbs; they were in good health, and could continue their former occupations as laborers or handicraftsmen without any disability

whatever. It thus appears that direct suture of bone to bone can be dispensed with, and that the operation for fracture of the patella can be simplified.

Pulmonary Embolism and Abscess Following Operation for Appendicitis.

Stone (*American Gynecology,* May, 1903) relates a case of operation on a previously healthy woman who had exhibited the characteristic symptoms of appendicitis for less than forty-eight hours. The extremity of the appendix, which contained a large fecal concretion, lay in a small collection of pus. The wound was drained. Symptoms of embolism set in suddenly fifty hours after the operation; the patient rallied after intravenous injection of saline solution. For a few days the patient did well, but the temperature and pulse remained above normal, although there was no evidence of peritonitis, and some pain was felt over the lower lobe of the right lung. On the eighth day after the attack an abscess ruptured into the right bronchus, causing severe dyspnea, collapse, and death within two hours. No necropsy was allowed.

Miller, discussing this case, thought that it was an instance of septic embolism. Bovée considered that lymphatic invasion explains such cases. He had observed it in a few cases which had died under nearly similar circumstances, though usually a little longer after the operation; the continuance of general febrile symptoms after the removal of the appendix was significant. Bovée believed that the secondary focus was present at the time of the operation.

The Surgical Treatment of Facial Paralysis by Anastomosis of the Facial Nerve with the Spinal Accessory.

At a recent meeting of the Paris Society of Surgery (*Lancet,* Aug. 22, 1903) M. Faure made an interesting communication upon this matter. He mentioned that the first operation of the kind was performed by Ballance in 1895. M. Faure recommended an anastomosis of the cut facial nerve with the trapezial branches. A lateral anastomosis could also be made of the trapezial branch of the spinal accessory nerve with the trunk of the facial after the latter had been refreshed, or the cut facial nerve might be united laterally to the refreshed trunk of the spinal accessory nerve. One or other of these operations had been carried out in fourteen cases; two of these were of too recent date for any deduction to be drawn from them. In none of the remain-

ing twelve had there been absolute failure. In all the functions of the facial nerve had been more or less regained by means of the spinal accessory. Electrical reactions were established rapidly, but more power came back but slowly. Muscular tonus was always reëstablished more or less completely.

Bullet Wounds of the Lung.

Koenig (*Berliner klin. Wochenschrift,* No. 32, 1903) made some observations, which he demonstrated by a number of clinical histories, as to active treatment of gunshot wounds of the lung with marked hemorrhage, and believes they should be treated similarly to hemorrhagic effusion of the joints. Shortly after the accident surgical intervention is seldom necessary. If in the course of two or three days, as his clinical histories show, dyspnea, fever, and cardiac depression evidence themselves, a thoracotomy should be made. Fever is usually due to a pneumococcus infection. In large hemorrhagic effusions this operation is advisable to hasten absorption. In performing a thoracotomy the strictest antiseptic precautions should be taken. If the effusion persists for months it may be relieved by repeated aspirations.

Tetany and Autointoxication.

Loebl (*Wiener klin. Wochenschrift,* No. 33, 1903) compared nine cases of so-called autointoxication with six typical cases of tetany, and arrived at the following conclusions: In typical autointoxications there is often found a number of the typical symptoms of tetany. In two-thirds of the autointoxications tonic cramps of the muscles of the extremities occurred, though they were not typical tetany contractions. Examination of the urine in tetany cases often showed disturbance of metabolism and transitory acetonuria, albuminuria, and casts, although a chronic lesion of the kidney was not found in tetany. The author believes that tetany is a disease due to autointoxication, in which the toxins have a special affinity for the nerve terminations of the muscles.

Surgery of the Prostate.

P. Thorndike (*Boston Medical and Surgical Journal,* Aug. 13, 1903) discusses the present status of surgery of the prostate and concludes: (1) That no prostatic should be allowed to suffer for lack of proper treatment. (2) There is still a place for

the catheter in such treatment, and many patients can be made comfortable and kept so by its systematic and proper use. (3) All those patients who cannot be kept comfortable by palliative means are fit subjects for some operation. (4) The operation of choice is always prostatectomy, but this operation can be properly offered to those patients only whose general conditions make them fair surgical risks, and such is rarely the case after sixty to sixty-five years of age. (5) To all other patients the Bottini operation can be fairly offered as one attended with little risk to life, a short convalescence, and a good prospect of such a degree of improvement as will at least do away with any further necessity for the systematic use of the catheter.

Narcosis in Ileus.

Kausch (*Berliner klin. Wochenschrift,* No. 33, 1903) believes in general anesthesia in all cases of ileus; only in those cases where strangulated hernia occurs or a colotomy is to be performed is it advisable to use local anesthesia. In order to prevent the danger of aspiration of vomitus the author uses a stomach-tube to which two rubber balloons are attached, and connected with a small rubber tube; one of these balloons is introduced into the stomach, thereby occluding the esophageal opening, although it is possible to expel the contents of the stomach through the tube. The author also keeps the patient's pelvis elevated.

MEDICINE.

The Psychical Relations of Tuberculosis in Fact and Fiction.

G. A. De Santos Saxe (*New York Medical Journal,* Aug. 8, 1903) says the consumptive exhibits in the average case traits of mind and of temperament that have been made use of by some of the best writers of fiction in describing the characters of tuberculous persons—traits that are well worth studying, inasmuch as they are directly connected with the disease, although not specifically characteristic of tuberculosis.

The psychical and temperamental traits of the average consumptive have not been studied by medical men with the attention which they deserve.

The only probable theory thus far advanced as to the causes of the mental and moral degeneration of the consumptive, lead-

ing even to criminal tendencies, is that of toxic poisoning of the central nervous system by the products of the tubercle bacillus, resulting in neurasthenia, psychasthenia, hysteria, and insanity.

The fundamental factors in the psychical make-up of the typical consumptive are the loss of self-control, the rise of brute selfishness, the increase of susceptibility to suggestion, to emotion, and to nervous irritation, and the tendency to rapid nervous and psychical fatigue.

There is no tangible proof that the sexual functions are exalted in tuberculosis, but in all probability the sexual irritability is raised in the early stages of the disease, and lowered coincidentally with the lowering of vitality in the later stages.

In all probability there is a connection between tuberculosis and insanity, the tuberculous toxin contributing, with other factors, in persons rendered susceptible by psychical and somatic degeneration to the derangement of the mind. Any form of insanity may be found in tuberculous persons, and the term "tuberculous insanity" should not be used to designate a type of insanity peculiar to tuberculosis.

The criminal tendencies of consumptives have been observed with sufficient frequency to justify an investigation into the medicolegal question of restricting the responsibility of a criminal on the ground that he is tuberculous. Mental and physical degeneration, together with the tuberculous intoxication already referred to, are the chief factors in the make-up of the tuberculous criminal.

The euthanasia of consumptives, which has excited speculation, is to be explained on purely physical grounds, the changes in the nervous system being so marked at the time of approaching dissolution as to efface the patient's suffering, and render his death easy.

The Import of Salivary and Nasal Secretions in Hay-fever.

At the recent meeting of the American Laryngological and Rhinological Society, D. B. Kyle (*American Medicine*, Aug. 28, 1903) read a paper under this title. He said that he had first become interested in this subject eight years ago. There can be no doubt that with the variations of reaction from alkaline to acid, and *vice versa*, the secretion must undergo decided changes in its chemic composition. It is a well known physiologic and therapeutic fact that certain drugs exert a selective action upon parts of the body. He has become convinced that by studying the saliva one can determine important changes in the chemic

process going on in the body. Hyperacidity is said to favor chemic change in the tissue with an increase in the proportion of organic acids. The chemic action of the saliva depends upon its ferments, the most important of which is ptyalin. A great many morbid processes have been traced to uric acid, but he believes that many equally important substances are deposited and eliminated. In this way might be explained many of the reflex neuroses, as, for instance, hay-fever. After a series of examinations of the saliva of certain individuals afflicted with hay-fever and of those not so afflicted, he has become convinced that the irritation often arises from a chemic change in the saliva. There is apparently a field for investigation in this direction. He has known a teaspoonful of common table salt swallowed at one dose to cut short more than one attack of hay-fever, thus showing the relation between the chemistry of the secretions and such irritative conditions. Hay-fever rarely if ever manifests itself in atrophic rhinitis, a condition which involves the mucous secretions. Certain attacks of so-called hay-fever often come on suddenly without apparent exposure to cold or other common source of irritation. In such cases he believes that, owing to some alteration in the chemic composition of the saliva, substances are formed which, on exposure to the air, become decomposed and give rise to irritants. Such an attack is comparable to the condition resulting in some individuals from the inhalation of ammonia. Normally the sulphocyanides and ammonia salts in the saliva are present in about equal proportions, whereas in many of these cases these compounds have been found to be in excess. In cases of hyperacidity the sulphocyanides are in greater proportion than the ammonia salts, and the secretions are less irritating; in cases of diminished acidity the reverse is true.

The Action of Hemolytic Sera.

Robert Muir (*Lancet*, Aug. 15, 1903) says the immune body and complement differ markedly from each other in their mode of combination and in the firmness of union.

Immune-body can be in part separated before hemolysis from red corpuscles containing multiple doses.

When red corpuscles containing multiple doses of immune-body are hemolyzed by the minimun dose of complement the surplus molecules of immune-body remain attached to the receptors of the red corpuscles and can be in part separated.

Complement after its union either directly with cells or indi-

rectly through the medium of immune-body cannot be separated again.

Each dose of immune-body taken up by red corpuscles in addition to the minimum hemolytic dose leads to the taking up of an additional and corresponding amount of complement. In this way many times the amount of complement necessary for hemolysis may be used up.

When red corpuscles containing multiple doses of immune-body are fully saturated with complement, immune-body can still be separated. The immune-body thus obtained comes off alone and not in the combination I. B. + C.

The Comparative Value of Oral and Rectal Temperatures in the Study of Pulmonary Tuberculosis.

From his investigation S. R. Williams (*Lancet,* Aug. 15, 1903) draws the following conclusions:

The temperature taken in the mouth during rest formed a trustworthy guide in the management of tuberculous cases under conditions of sanatorium life.

The temperature taken in the mouth during or shortly after exercise could not be considered trustworthy unless accompanied by such precautions as militated against their general practical applicability.

The temperature taken in the rectum during rest generally speaking registered higher than in the mouth, but did not otherwise usually afford any special assistance in the management of tuberculous cases.

The temperature taken in the rectum during or shortly after exercise in both healthy and tuberculous subjects registered a temperature considerably higher than that in the mouth, and whilst in the non-tuberculous the return to normal was more rapid than in the tuberculous, no special advantage for the latter appeared to accrue from this method.

Acute Amaurosis Following Infantile Convulsions.

H. Ashby and S. Stephenson *(Archives of Pediatrics,* August, 1903) describe a series of cases of amaurosis which they believe to be directly due to severe convulsions. Thus, the infants developed a series of convulsions with coma (resembling the status epilepticus of adults), and upon recovery were found to be blind and sometimes to be hemiplegic or aphasic. There was no evi-

dence of meningitis. Ophthalmoscopic examination yielded negative results. The authors distinguish this form of blindness from the amaurosis, also without ophthalmoscopic signs, which may accompany or follow posterior basal meningitis in infants. They conclude (1) that there is a form of post-eclampsic amaurosis due to anesthesia of the visual centers, occurring in infants; (2) that the convulsions, which may be due to various causes, are apt to be severe and accompanied by coma; (3) that the amaurosis may be associated with aphasia and paresis of hemiplegic distribution; and (4) that the amaurosis is for the most part transient.

The Pathology of Smallpox.

W. R. Stokes (*Johns Hopkins Hospital Bulletin,* August, 1903) says the early skin lesions indicate that the primary infection in smallpox takes place in the lungs, probably by inhalation. The poison when it enters the circulation shows a selective influence on the epithelium of the skin and respiratory tract, and many cases are probably not further affected.

The serious and fatal lesions of smallpox are caused by the secondary infection from the skin and respiratory tract, and the infectious agent is usually the streptococcus pyogenes. This organism is so distributed throughout the lesions as to explain most of the visceral changes, such as thrombosis, local necrosis, and the various pulmonary changes.

This streptococcic septicemia is the most striking feature of fatal smallpox, and if it were possible to overcome this condition by a special serum the mortality from the disease would be greatly reduced.

Esophagoscopy.

E. A. Aronson (*Medical News,* Aug. 29, 1903) says the indications for esophagoscopy are: (1) To note the site and character of foreign objects within the esophagus; (2) to recognize local lesions, such as erosions, ulcers, etc.; (3) to note the character of an obstruction, if one is present; (4) to recognize new growths, benign and malignant; (5) to recognize a diverticulum, though this is not easy; (6) for differential diagnosis between organic and functional conditions of the esophagus; (7) last, but most important, for therapy, such as the extraction of foreign objects, local treatment of ulcers, erosions, etc. Among contraindications may be mentioned nervous patients, debility, patients with short, thick necks, marked emphysema and dyspnea, myocarditis and

uncompensated heart lesions, aneurism and arteriosclerosis, kyphoscoliosis, liver cirrhosis with tendency to hemorrhages, acute inflammation of the esophagus.

Exophthalmic Goitre.

The benefit derived from administration of salicylate of soda in the treatment of Basedow's malady is being continually corroborated by practitioners in France. M. Chibiel, who recommended this treatment, reported lately four cases very amenable to the drug. He prescribed one drachm daily in Vichy water. The improvement was very rapid. M. Babinsky communicated to the Société de Neurologie at Paris (*Medical Press,* Aug. 19, 1903) three cases, of which two were accompanied with intense tachycardia, 120 to 140 pulsations. After a few months of the salicylate treatment the pulsations fell to 80 and the trembling disappeared. In the third case, where the only symptom was goitre, the gland entirely disappeared at the end of three months. No other treatment was employed in any of these cases.

Cartilage in the Kidney.

Natanson (*Wiener klin. Wochenschrift,* No. 29, 1903) reports a case in which he found an isolated area of hyaline cartilage as such, and not in the form of a mixed tumor, in the cortical substance of the kidney. The preparation was derived from a child in which the right kidney was absent and the left one very small, the child living fifty-four hours, however. The author explains this anomaly by adopting the views of Marchand, and concludes that it is a case of metaplasia—in other words, a superinvolution of the embryonic analogue of the kidney.

Miners' Phthisis.

T. Oliver (*Medical Press,* Aug. 19, 1903) is of the opinion that this disease is not caused by the inhalation of any of the gases present in mines. The writer says in pneumokoniosis there may be not only excess of fibrous tissue, but even cavities and tubercle. The disease is, however, non-tuberculous.

Accepting this view of the pathology of the disease, there is hope that by improved ventilation and by laying the dust with water miners' phthisis may still further be diminished.

THERAPEUTICS.

The Intravascular Use of Antiseptics.

D. Shaw (*British Medical Journal,* Aug. 15, 1903) records experiments undertaken to estimate the value of intravascular injections of antiseptics in infective diseases. The antiseptics tested were chinosol, guaiacol, and formalin. Experiments were first made with animals infected with bacillus pyocyaneus. In all cases the injected animals died more quickly than the control animals injected with the bacillus pyocyaneus culture alone, and the organism was in each case recovered from the heart blood. Even in the case of administration of large doses of formalin solution, which if they had been retained in the blood would have rendered it a 1-in-1500 solution of the antiseptic, there was no retarding growth on cultures obtained from the heart blood at necropsy. The antiseptic appears to be rapidly taken up by the tissue, and such injections can have but the very smallest amount of therapeutic value in septicemia. Injections of formalin were also tested in rabbits infected with tuberculosis. One animal which received a submaximal dose of formalin died in thirty minutes after injection, and the necropsy appeared to show that the death was due to acute miliary tuberculosis of the lungs, impeding the blood flow through the lungs and preventing the rapid passage of the pulmonary capillaries. The formalin thus concentrated in the lungs would interfere with their normal functional activity. This experiment indicates a probable danger in the use of these injections in pulmonary tuberculosis; other experiments appeared to show the absence of any therapeutic effect on the disease. The experiments were somewhat few in number for a general statement.

The Best Methods to Prevent Hydrophobia.

Follen Cabot (*Medical News,* Aug. 15, 1903) gives the following as the best method of local treatment for wounds infected by rabid animals: If the patient can be etherized, scrub the wound with a stiff brush and tincture of green soap, then with mercury bichloride 1 to 1000. After this, fuming nitric acid should be applied by means of a pointed glass rod. If an anesthetic cannot be used, scrub and clean as before, apply cocaine, then pure carbolic acid, then the nitric acid as before. The poison of rabies is very slowly absorbed, and experiments upon guinea-pigs show

that the method advised is very effective even after the lapse of twenty-four hours. At the end of two days nitric acid is still of great value.

Intravenous Injections of Oxygen.

Sturtz (*Centralblatt für innere Medicin*, No. 32) in verifying the experiments of Gartners, in which continued injections of oxygen into the veins of dogs was performed without serious results, proceeds to determine the limit to which this transfusion can be carried. He found that an infusion of one-fifth of the total amount of the oxygen normally found in the blood can be given per minute without bad effects. Larger quantities result in acute dilatation of the heart, serious systemic disturbances, and sudden death. Examinations of the gaseous interchange show that the oxygen assimilation in the lungs is reduced. The author has not yet determined as to whether this method is warranted in dyspneas or affections of the muscles of respiration.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

The Indications for Operative Intervention in Middle-ear Suppuration.

D. Patts (*American Journal of the Medical Sciences*, July, 1903) gives the following review of the symptoms indicating operation in cases of chronic suppurative otitis media. Profuse and long-continued discharge, he states, is suggestive, but not diagnostic, of extension of the suppuration to the antrum or mastoid process. A fluctuating swell over the mastoid process is diagnostic of such extension, but its absence would not contraindicate operation. Edema behind the auricle is often due to furuncle or some other inflammatory affection of the external ear. Tenderness over the mastoid process, especially in the region of the antrum, is of great significance, and the more so if it be persistent; but it may be doubtful or absent if the outer table be much sclerosed. Inflammation of the upper and posterior boundaries of the canal, marked by tenderness and bulging, is one of the most important signs, and its persistence, in spite of treatment, may be regarded as a sure indication for operation. A sinus, whatever its location, leading into the mastoid process is a positive indica-

tion. Facial palsy is not regarded as an important or significant diagnostic symptom. Epileptiform attacks are unusual in cases of suppurative ear disease; when observed, they indicate possible cerebral pressure. Marked and rapid failure in health is more apt to occur in adults than in children. The temperature is usually higher in children than in adults. A slow and thready pulse out of proportion to the elevation of temperature, irregularity or sluggishness of the pupils, rapid failure of health, and rigors or convulsions, are to be regarded as signs of intracranial pressure. Tenderness and edema over the occipital bone are very apt to be present when the lateral sinus is thrombosed.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

The Pathology of Smallpox.

In the *Johns Hopkins Hospital Bulletin* for August, 1903, W. R. Stokes, of Baltimore, gives an exhaustive study of the pathology of smallpox. Of the changes in the skin he writes: The first change, according to Unna, consists in an edema and swelling of the epithelium. Many of these cells undergo softening and colliquation, forming a cavity, while others remain as septa, dividing the cavity up into smaller loculi.

The epithelial cells undergo a special degeneration which is known as ballooning, and which affects all of the various layers, even penetrating into the hair follicles. These swollen cells often attain from two to three times their normal size. They sometimes retain their nuclei, but the cytoplasm becomes perfectly clear, and the nuclei are often fragmented. It is a variety of coagulative necrosis. Sometimes two or three nuclei are present in one cell.

The epithelial cells continue to undergo liquefaction, and this causes an increase in the size of the cavity; at the same time mitoses are found in the cells forming the circumference of the cavity. The cells become compressed, and undergo fibrinoid degeneration, forming strands in the cavity, which give the reaction for fibrin.

Umbilication is explained by the fact that the degeneration and edema of the epithelial cells take place more at the periphery of the vesicle. The less swollen center remains behind. Unna does not believe that the cords of the compressed epithelial cells running through the vesicle act as guy ropes, but that the edema and compression is exerted more at the sides of the vesicle, and

thus this portion of the lesion extends beyond the less compressed center.

In the vesicular stage an exudation of serum takes place, and neutrophilic leucocytes also emigrate from the vessels into the vesicle, forming the pus of the vesicle. These infiltrate the cutis, and also soon fill the vesicle, producing the pustular stage of the disease. This primary invasion of leucocytes is due to the smallpox poison, but often at the end of the first week there is a second leucocytic invasion, due to a secondary infection with the pyogenic cocci.

As the pustule begins to dry, a scale or crust is formed, and the lesion is invaded by sprouting projections of newly formed epithelial cells. The upper layers become horny, the lower layers form the other normal cellular layers. In order not to form a scar, the newly formed epithelial cells must grow in an even layer with the convex surface downward, and the stratum Malpighii must not have been destroyed by the process of degeneration.

There is one change which should be mentioned in this connection, and that is the appearance of the plasma cells in the corium. It is held by many that the injury caused by the poison to the epithelial cells is the very first change which is apparent. In some sections made from very early papules the epithelial cells show little or no change, but the corium shows a marked infiltration with the plasma cells. These are usually collected about small arteries and capillaries. Dr. Gilchrist is of the opinion that this plasma-cell invasion is the earliest change to be noted in smallpox, and this opinion accords very well with the best conception of the method of infection.

It is inconceivable that the poison comes in contact with every portion of the skin at practically the same time, thus causing infection. It seems more rational to believe that the cause is inhaled, and that by means of the circulation it reaches the skin, where it causes widely distributed lesions.

The primary exudation of the plasma cells from vessels followed by the various epithelial lesions supports this theory.

Precancerous Affections of the Skin.

M. B. Hartzell, of Philadelphia (*Journal of Cutaneous Diseases,* September, 1903), says that a small number of diseases of the skin, after existing for a longer or shorter period as benign affections, exhibiting neither the clinical nor histological features of malignancy, terminate in epithelioma. These diseases do not belong to a single pathological group, but include inflammations,

neoplasms, hypertrophies, and such alterations of the skin as may result from previous disease or injury.

The peculiar inflammation of the skin occurring in workers in tar and paraffin shows special predisposition to be followed by carcinoma. The chimney-sweep's cancer, which follows a dermatitis of the scrotum due to irritation of soot, and the same affection which occurs upon the scrotum in smelters of arsenical ores, are well known.

Epithelioma may occur in the nodule or the scar tissue of lupus vulgaris and other forms of cutaneous tuberculosis, such as tuberculosis cutis verrucosa.

Ulcerating tertiary syphilis, in rare instances, becomes the seat of cancer; chronic ulcers of the leg and cicatrices from burns often serve as a starting point for cancer.

New growths of the skin, congenital or acquired, after a longer or shorter duration as benign affections, may undergo cancerous change, warts and pigmented nevi showing the greatest tendency to such a metamorphosis.

Various forms of circumscribed keratosis, such as cutaneous horns, callosities, the palmar and plantar lesions resulting from arsenical poison, are not infrequently the seat of epithelioma; but the most frequent and perhaps the most important form of precancerous keratosis is that seen so frequently in the face and in the hands of adults past fifty years of age, the so-called senile seborrhea.

Smallpox in the Fetus.

J. H. Franklin, of Spring Valley, Ill., reports the following in the *Medical Record* of September 5, 1903:

W. M.——, an American, aged thirty-two years, became ill on the evening of March 1. A physician was called on March 3, and the typical eruption of smallpox appeared on March 4. The family, consisting of the wife and three children, were vaccinated on March 5. Mr. M——'s case ran the typical course of variola.

Mrs. M——, of German descent, aged twenty-eight years, was seven and a half months pregnant at the time her husband was attacked. She had had one miscarriage two years previous to this time. She claimed she had never been vaccinated, although, having been born in Germany, she may have been vaccinated when an infant, but no scar was visible. Five days after the first vaccination she was vaccinated again, successfully. During the time of the quarantine, which was until April 1, Mrs. M—— complained of no constitutional symptoms whatever, and there

was no skin eruption of any kind. Two weeks following the raising of the quarantine, or on April 14, she began to have labor pains, and on the afternoon of that date was delivered of a full-term child with the typical eruption of smallpox in the pustular stage. The lesions on the child were large, at least a quarter of an inch in diameter and deeply umbilicated, and while very numerous were discrete. The child had evidently been dead for several days, as it was slightly macerated. The mother made an uneventful recovery, no rise in temperature occurring, and she was up on the tenth day.

This woman never complained of constitutional symptoms of any kind, for which reason it is extremely improbable that she had variola without eruption.

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W. Krusen (*American Gynecology*, August, 1903) reports a case of IX-para, seen in consultation.

The diagnosis of placenta previa had already been made. The patient had been bleeding regularly for five weeks; her general condition was good, and the pregnancy was about at term. The os was slightly dilated, so that little difficulty was experienced in passing a finger through the cervical canal and feeling the characteristic sponge-like placental tissue. Under ether anesthesia rapid manual dilatation and podalic version were performed, with speedy delivery of the child. The dilatation of the os was easily accomplished, as the woman had borne nine children and had a roomy birth canal. The hemorrhage during the detachment of the placenta, which was centrally implanted, was exceedingly profuse. The right anterior leg was brought down first, followed in a few seconds by the other, and the buttocks temporarily controlled the hemorrhages. The child was speedily delivered, although in extracting the arms the right humerus was broken. As the uterus was much relaxed the placenta was immediately delivered manually. There was no shock. The child was slightly asphyxiated, but was easily resuscitated. The mother made an uneventful recovery.

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HAY-FEVER.—There are many theories regarding the causation of hay-fever, including uric acid or other depraved state of the system, microörganisms in the air, and pollen from plants. Whatever theory is adopted and a systematic treatment undertaken to correspond with it, it has been found that intelligent local treatment is productive of great benefit.

For this purpose a thorough washing or douching of the nasal passages with a weak hot solution of Tyree's Antiseptic Powder has been found very beneficial. It cleanses the membrane of poisonous secretions, soothes its irritability, and tones it up and strengthens it to resist further invasion. By frequent repetition, as soon as any feeling of discomfort begins to return, the attack can be greatly shortened and the patient made comparatively comfortable throughout its duration. — J. S. TYREE, Manufacturing Chemist, Washington, D. C.

SOME EXTERNAL USES OF ICHTHYOL.—A writer in the *Surgical Clinic* (ii, No. 6) descants as follows: The surgeon and gynecologist who uses ichthyol intelligently has one of the most generally useful and reliable agents in the whole remedial list. Diluted in various proportions with water, glycerin, or oils, it serves as a solution for spray, douche, irrigation, or to keep moist the dressing of dirty wounds or sores. Mixed with lanum, lard, petrolatum, or cimple cerate, it makes one of the most effective ointments known. For gynecological use, it is applied to the cervix on tampons mixed with glycerin, iodine, boro-glyceride, and hydrastis, or, in very severe inflammatory cases, it can be used reduced one-half with glycerin or water. Nothing will stop the usual cervical diseases so speedily, and pruritus vulvæ and ani yield to it in three days. Acne, and most skin troubles, are remarkably benefited or cured by its frequent application in varying strengths; and acne indurata, one of the most troublesome things the doctor has to treat, can be cut short by the following:

Ichthyol, 2 dr.
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Brandy, 6 dr.

Keep well corked, and apply at night, washing off the face with hot water in the morning.

If the physician will take the trouble to open the acne pustules with a small, sharp lance, and apply to each opening—after evacuating the contents—a drop of hydrogen peroxide and let the patient use the above application at home, the worst case will be satisfactorily cured. In these cases it is well to give 3 drops of ichthyol every three hours, in capsule or pill.

GERM-DESTROYING AND NERVE-SOOTHING. — The following excerpt from an article in the *Virginia Medical Monthly*, by Stephen J. Clark, M.D., 66 W Tenth Street, of this city, plainly outlines the useful combination of two leading remedies in materia medica:

"Binz claims specific antiseptic powers for quinine; other writers are in accord with him on this point, and report good results from large doses in septicemia, pyemia, puerperal fever, and erysipelas. It is a germ-destroyer of the bacilli of influenza (la grippe). Antikamnia and quinine tablets will promptly relieve in this disease. Quinine is a poison to the minute organism, sarcina; and antikamnia exerts a soothing, quieting effect on the nerve filaments. A full dose (two five-grain tablets) of this remedy will often arrest

HAY FEVER

There Are Many Theories

regarding the causation of HAY FEVER, including Uric Acid or other depraved state of the system, Micro-Organisms in the air and pollen from plants. Whatever theory is adopted and a systemic treatment undertaken to correspond with it, it has been found that intelligent local treatment is productive of great benefit. ¶ For this purpose a thorough washing or douching of the nasal passages with a weak hot solution of **Tyree's Antiseptic Powder** has been found very beneficial. It cleanses the membrane of poisonous secretions, soothes its irritability, and tones it up and strengthens it to resist further invasion. By frequent repetition as soon as any feeling of discomfort begins to return, the attack can be greatly shortened and the patient made comparatively comfortable throughout its duration.

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a commencing pneumonia or pleuritis. These tablets are also useful in the typhomalarial fever of the South—particularly for the hyperpyrexia—both quinine and antikamnia, as previously said, being decided fever reducers. They are likewise most valuable in cases of periodical attacks of headache of non-defined origin; of the so-called 'bilious attacks;' of dengue; in neuralgia of the trigemini; in that of 'ovarian catarrh;' and, in short, they are effective in every case where quinine would ordinarily be prescribed, and without the 'ringing' which generally accompanies the administration of quinine alone." — *New York Medical Journal.*

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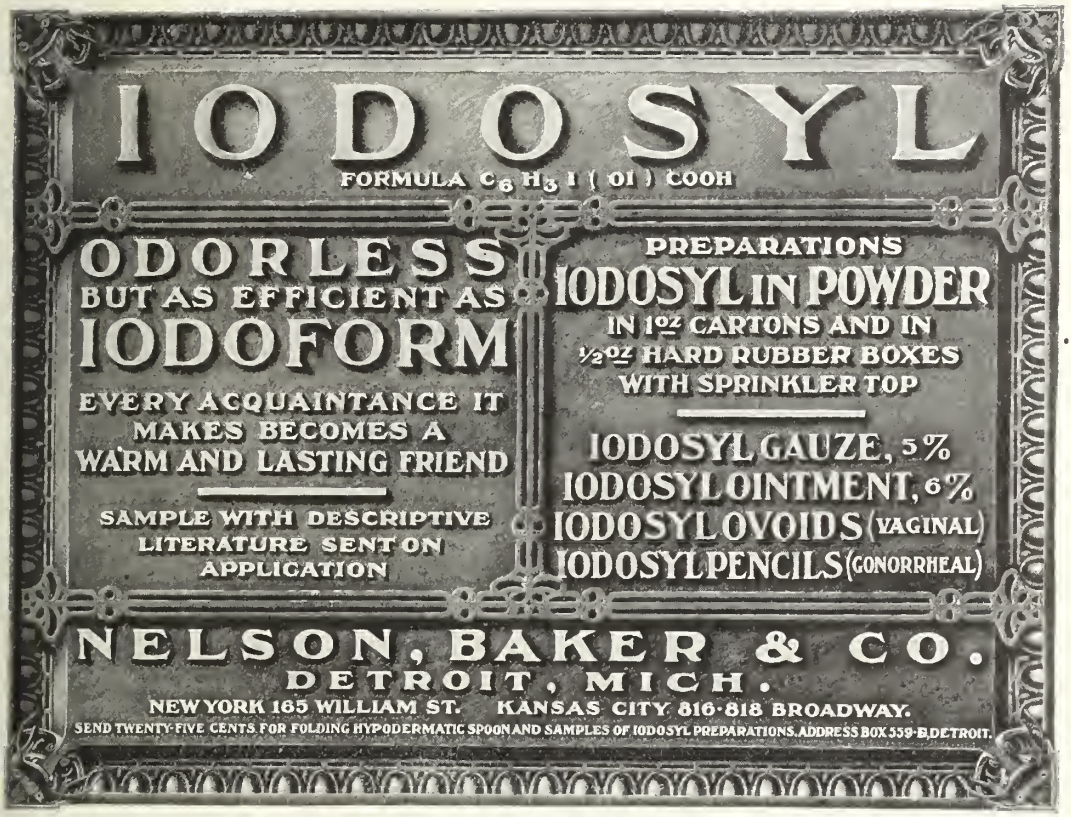
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THE TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE EAR.—Seth Scott Bishop, M.D., LL.D., of Chicago, Ill., Professor in the Post-Graduate Medical School and Hospital of Chicago, Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College, etc., says:

The diversity of opinion relative to the advisability of irrigating the ear in suppurative conditions of the tympanic cavity is something worthy of remark. Some excellent otologists disapprove of the practice. With others it is a common practice to syringe suppurating ears with the solution of bichloride of mercury—1 to 5000—in the beginning of treatment, at least, and even during the course of treatment.

Believing that the most thorough cleanliness is absolutely essential to a cure of suppurating ears, I begin the treatment by having them syringed with the sublimate solution as warm as can be borne with comfort, using at least a quart at a time with a continuous flow syringe.

Inflation is then practiced with antiseptic vapors, like camphor-menthol, in a 10 per cent solution. The discharges that inflation may project into the meatus are then removed with cotton.

The next step is to fill the ear with warmed H_2O_2 medicinal. I have seen it claimed that warming this remedy would deprive it of its potency, but I have employed it in this manner for years without observing such a result.

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Marine Hospital Service) will be of interest to many of our readers:

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The percentage of failure among candidates who have not had special preparation is very high, as may be easily ascertained by any one inquiring. This is not so much because of any intrinsic difficulty in the examinations, as because they are peculiar, and men who are unprepared for these peculiarities fail in consequence. An experience of many years justifies the statement that the average man, *properly prepared,* is usually successful.

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All candidates will be expected to present to the Boards their medical diplomas and such other testimonials of educational and professional fitness as they possess. A candidate may, with the consent of the Board, withdraw at any time during examination, and the Board often advises him to withdraw if he is not doing well. Should he complete the examination and be found not qualified, he may be allowed a second after one year, but not a third. *Appointments are made from the successful candidates in the order of merit reported by the Boards, and political or other influence will make no change in this order and will only harm any one who attempts to make use of it.* A qualified candidate not appointed within one year (Navy or Marine Hospital Service), or two years Army), must submit to a reëxamination. *Such a necessity, however, has not occurred in the experience of the Quiz.*

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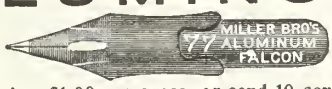

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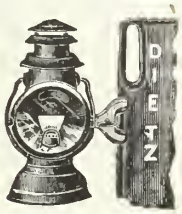

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OTITIS.—Hugh Blake Williams, M.D., of Chicago, Ill., says that the element of chronicity in suppurative inflammation of the ear is doubtless due to lack of thoroughness in treatment, and though the method of procedure mapped out here will not succeed in cases where necrosis has occurred, it will in all others reduce the duration of treatment from months to days.

The patient is placed upon the side with the affected ear up. The concha is then filled with Hydrozone, which is allowed to remain until it becomes heated by contact with the skin, when by tilting the auricle, the fluid flows gently into the external canal. The froth resulting from the effervescence is removed with absorbent cotton from time to time and more Hydrozone added. This is kept up until all bubbling ceases, although the patient will hear the noise even after the effervescence ceases to be visible to the eye. When it has ceased altogether, however, the canal should be dried with absorbent cotton twisted on a probe, and a small amount of pulverized boracic acid insufflated.

The time necessary for the thorough cleansing of a suppurating ear will vary from a few moments to above an hour, but if done with the proper care it does not have to be repeated in many cases. However, the patient should be seen daily and the Hydrozone used until the desired result be obtained.

In children and some adults the Hydrozone causes pain, which can be obviated by previously instilling a few drops of warm solution of cocaine hydrochloride. "It has been the intention of this note," concludes the writer, "to treat suppuration of the ear rather as a symptom and from the standpoint of the general practitioner."

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ORIGINAL CONTRIBUTIONS.

MANAGEMENT OF PREGNANCY.

BY W. S. PHILIPS, M.D., BELLE CENTER, OHIO.

The physician who conducts a case of pregnancy to a successful termination, in which, as is often the case, unaided nature is not equal to the emergency, has well earned the gratitude of one family and rendered a valuable service to the State.

For want of time we are obliged to refer cases of preëxisting or intercurrent disease on the part of the mother to the physician in the ordinary routine of his work, and to the abdominal surgeon, confining our paper to the morbid conditions growing out of the pregnant state, which annoy and menace the life of both mother and her unborn child.

As germane to the subject, it is necessary to invite the confidence of the family in this matter of interest, in order that the physician may have his case well in hand from the beginning, as many cases terminating disastrously are due to lack of intelligent supervision, arising from want of mutual confidence. The physician who would render the best service to prospective parents should instruct his clientele as to the importance of intelligent supervision, and thereby secure their coöperation.

While pregnancy is strictly a physiologic process, human environment and habits of life render it one beset with danger to health and to life itself. When we have learned to pilot these cases to a successful issue, we are prepared to offer one of our best gifts to humanity.

Much has been written in the way of speculation with reference to stamping certain mental and moral characteristics upon the unborn child through the conduct of the expectant mother during the period of pregnancy. It is the belief of the writer that the inheritance of heredity is transmitted along the lines of

what people are rather than what they may presume to be for a period of a few short months.

The first question to be settled in each case is whether or not pregnancy exists. An opinion is to be formed from the totality of signs and symptoms with which all are more or less familiar, but in any case of doubt, which at times occurs even in the minds of the most expert, it should be remembered that error must be made on the side of safety.

In the first place, it is good practice when meeting with any trouble whose origin may reasonably be referred to local causes, and which does not readily respond to hygienic and medicinal treatment, to make an examination with reference to the position of the uterus. Versions and flexions, especially when development causes impingement of the uterine wall against the osseous framework of the pelvis, give rise to both local and general disturbance and an eventual miscarriage. When no adhesions exist, these can ordinarily be remedied by reposition once or oftener if need be, maintaining in the intervals the degree of correction first gained by an easy-fitting support.

The next consideration, having especial reference to the welfare of the fetus, is the detection and correction of malpositions during the period of intra-uterine life. This is an especially serious matter, in the experience of the primipara during the last month of gestation, if the position of the child should be oblique or transverse. When the abdominal walls are thin, the malposition can frequently be detected and correction brought about by external manipulation, the correction being maintained by a snug-fitting bandage. However, if the usual longitudinal position be reversed, resulting in a breech presentation, detection is not so easy, and correction is difficult, if not impossible, on account of the usually scant amniotic fluid, with consequent short lateral dimensions of the uterine body, and it is better referred to the obstetrician well trained in the dexterous application of the forceps to the after-coming head.

The catalogue of diseases affecting primarily the expectant mother and directly traceable to gestation may, as a rule, be grouped into a single class, having their origin in the accumulation of effete products in the system, or in the disturbed balance between food ingestion, quickened processes of nutrition, and elimination of waste from the body.

That the nourishing of two similar lives in one body brings about any physiologic process essentially different from the ordinary, save in that of heightened activity, is incomprehensible;

hence we conclude that the diseases having their origin in the pregnant state owe their existence to this circumstance. This conclusion is emphasized by the happy results of treatment based upon this view of the case. A single exception may be noted, that of nausea, which seems to be of mixed origin: first, reflex; secondly, toxic; and thirdly, a combination of the two.

The reflexes from the gravid uterus exert but a slight influence upon the other morbid states, except that of general nervousness, and consist of neuralgias, principally headache and enteralgia, vertigo, anasarca, eclampsia, insanity, pernicious anemia, and tuberculosis. The first three mentioned are danger-signals to warn the alert physician of possible disaster if unheeded, and are the lesser manifestations of toxemia, first, upon the nervous system, and secondly, upon the fluidity of the blood, allowing extravasation into the lymph spaces and surrounding cellular tissue, thus relieving the blood of a certain amount of its toxicity. A coincident warning oftentimes occurs in the filtering of albumin through the overworked and irritated kidney.

While it is generally conceded that eclampsia is of toxic origin, it may also be assumed that insanity and pernicious anemia, having their origin in pregnancy, are due to the same cause, for the reason that they are prone to disappear when the period of lactation is ended, and like insanity, having its origin in other conditions, have a predilection for the time of year when the average temperature is relatively high. In addition to an excess of chemic products, evidence is not wanting which indicates the presence of unused organic matter in the circulation, which we believe forms the basis of susceptibility to tubercular infection.

In the case of the healthy pregnant woman, observation reveals three of the physiologic functions noticeably altered, viz., appetite quickened, perspiration diminished, and exhaled breath unusually fetid, the reason for which is obvious. In the first place, the requirement for an additional food supply by the development of a new life, and the derivative effect upon the circulation due to the same cause, depleting the cutaneous vessels, renders the glandular structures of the skin functionless and forces the lungs to perform compensatory work.

That these alterations in the physiologic functions of the body in the case of pregnancy bear an important relation to the morbid states enumerated there can be little doubt. Some people inherit the inability to eliminate the waste products formed by the processes of nutrition, while in others it is acquired by

disease in early life, and any circumstance calling for an additional food supply disturbs the normal balance between health and disease.

With this view of the etiology, it is evident that the management instituted to steer clear of these formidable complications must be dietetic and eliminative, and has been found successful in its empiric application during the lifetime of the present generation. The first principle, then, to be impressed upon the mind of the expectant mother is self-mastery. Appetite, whether natural or acquired, is the most tyrannical master in the sphere of the moral universe, and it is a fact that civilization is exemplifying the accusation recorded against Catiline, of "bowing his head like the beasts of the field in obedience to his stomach." Under no circumstances does self-control in this respect become more imperative than in pregnancy, and the physician should recognize the fact that there is a definite relation between the amount of food ingested and the excreta thrown off from the body, through the different channels of elimination; conditions of atmospheric temperature and exercise should be taken into account, and physicians should see that the amount of food eaten is commensurate with the ability of the excretory functions to take care of the waste material. Sometimes it will be found necessary, in order to have the patient properly nourished, to keep the skin, kidneys, and bowels stimulated to activity by the different agencies at our command. Within reasonable limits the size of a babe at birth, as compared to that of its parents, bears no relation to longevity or mental and physical development in after-life; and while we may admit that a bountiful menu, generously partaken of, three times a day or oftener, is an essential ingredient in the ability to nurture and bring forth a bouncing baby of immense avoirdupois, it is a fact of no special virtue other than tickling the vanity of a proud father, while piled up in the other side of the balance is discomfort and disease, lack of muscular tone, making labor tedious, injury to some of the bodily structures which the skilful hand of the surgeon can only approximate to their original integrity, anguish of soul and body, and too frequently death, either before or after delivery.

The remaining perplexity with which one has to deal occasionally is reflex nausea, which does not yield to dietetic or medicinal means, and which has to be overcome by cervical dilatation, a remedy ordinarily efficient, and yet attended with grave danger to the life of the fetus. No definite rule can be laid down as

to the amount of force to be applied or the extent of dilatation to be made, the toleration of the tissues of the mother being variable. A safe proceeding is to begin with the smallest amount of dilatation observable, using a steel dilator, increasing the amount of dilatation at intervals determined by the length of time required for the disturbance occasioned thereby to subside, until the trouble disappears or until the pregnancy is terminated.

An opiate administered hypodermically is a useful adjunct, as long as any hope is entertained of preserving the life of the fetus intact.

SECOND SUMMER COMPLAINT OF INFANTS.*

BY WILLIS R. MOSS, M.D., CLINTON, KENTUCKY.

The disease which the writer has denominated the second summer complaint of infants has several synonyms: it is known as infant diarrhea, summer diarrhea of infants, fetid diarrhea of infants, and cholera infantum.

Some confusion exists in relation to the term cholera infantum. It must be remembered that this is an acute condition, explosive in nature, with characteristic choleraic symptoms, as the name implies, and is not necessarily confined to any particular period during infantile life. It is occasionally the first manifestation of disease in the infant, but is most frequently associated with, and supervening upon, the original condition of summer complaint.

The other terms all have the same pathological and clinical significance, and represent a disease which may be either acute or chronic, occurring during a certain cycle of life, and depending upon conditions and exposures incident to that period. These several pathological manifestations being so akin (really interchangeable phases of the same disease), it seems impossible to discuss one without the other.

Both cholera infantum and second summer complaint are due to structural changes in the stomach and intestines, generally an enterocolitis. In the graver forms the lesions seem to bear an indifferent relation to the results, and lead one to suspect some systemic toxic agent acting upon and through the nervous system, rather than the process of intestinal inflammation.

It is that persistent and wasting condition of infantile life known as second summer complaint which the writer especially

*Read before the Kentucky State Medical Association, Louisville, 1903.

desires to discuss. This we have wth us every summer, and it constitutes the *bête noire* of the physician. That this wasting diarrhea does not occur (barring exceptions) in the very young or tender infant, prior to the teething period, when its whole organism would seem most susceptible to disease influences, must be accepted as significant, and leads to the conclusion that there must exist physiological predisposing influences (if I may be allowed to use the term) which, taken in connection with the period of life and season of the year, combined with the pathological influences, account for the great amount of the disease and high mortality during the second summer—in the majority of cases from the thirteenth to the twenty-second month of age. This is a period in which takes place an important change in the human being; the others (puberty and the menopause) are fraught with many important pathological probabilities, but teething with far greater risk to life.

Let us review the physiological processes and pathological agencies going on, and augmenting, predisposing and exciting influences, to develop this particular disease, summer complaint. At this particular age and season anatomical and physiological changes are being wrought to fit the individual for an independent existence. Heretofore its sustenance has been drawn from nature's storehouse—certainly well suited to its rudimentary and undeveloped organism; but a change must come, it must be equipped for an individual and independent existence consistent with the great manufacturing and assimilating processes which it will soon be called upon to perform. The salivary glands are rudimentary in early life, there being no need for starch digestion. As they are developing about this critical time, the secretion from them is acrid, irritating, germ-cultivating, and the abundant buccal fluid (present in teething children) is caused by pressure of the crown of the teeth on the gums, more particularly by forcing the teeth back on the sensitive nerves. The mouth of the infant under these circumstances becomes a favorable field for germ culture. These germs—meeting with no antagonizing influence in the stomach, which is a comparatively functionless expansion of the alimentary tract undergoing physiological evolution; nor in the intestinal, glandular, and absorbent apparatus; nor lower down in the solitary glands, Peyer's patches, etc., which are also undergoing development and preparation for the complex processes of digestion, absorption, and assimilation—are sufficiently irritating to excite a diarrhea, the typical second summer complaint.

No other period of life calls for more expenditure of nerve force and vital energy than the second summer; under the physiological strain the frail organism of the infant often succumbs to disease, and generally the imperfectly developed and abused alimentary tract is the greatest sufferer. The whole physical fabric of the tender being must undergo development and reconstruction before entering upon the independent career which lies just in advance.

Irritation of the gums and dental nerves often produces inflammation of the buccal tissue, fever, restlessness, loss of appetite, impairment of digestion, extreme nervousness, irritability, local or reflex, sufficient to cause spasms, which sometimes yield to scarification of the gums over a tooth about to come through. How many times have we seen relief from diarrhea follow eruption of a tooth? However, dentition is not the sole cause of summer diarrhea, it is only one of the many causative factors.

The majority of cases of summer diarrhea occur in artificially fed children. Summer heat predisposes to diarrhea in connection with the influences of decomposition already mentioned. The child is wrapped in blankets and kept in the hottest room of the house—for fear of its taking cold! Under these circumstances and surroundings it is evident that the child is almost famished for the want of a cool drink. What does it get? A hot bottle of milk, or the mother's breast, every time it stirs! Solar heat also irritates the nerve endings and is reflected upon and deranges the functional activity of the various organs of the body, more especially the liver, resulting in passive engorgement of the portal circulation, and consequent well known troubles. Here is where water plays an important part in the treatment of this disease. As a prophylactic it is worth more than any other one agent at our command, and I might add as a remedial agent it is of more value than the whole therapeutic armamentarium.

The treatment may be summed up in a general way as (1) dietetic, (2) hygienic, and (3) therapeutic.

If infants at this critical period of life could have the dietetic and hygienic care which their helpless state requires, the mortuary column of summer complaint would bear a more favorable ratio to other diseases than exists at present. Observation proves that too much care cannot be bestowed upon the sanitary environments of the infant both as prophylactic and curative measures. After the disease has gained a foothold (generally in the absence of dietetic and hygienic care), the

proper dietetic and hygienic management, with plenty of cold water internally and externally, will act almost magically in its arrest. If possible the infant should be removed to a cool and quiet atmosphere; but in the great majority of instances this cannot be done, therefore it should be the chief concern of the attending physician to make as nearly as possible the surroundings approximate the ideal. The nursery should be well ventilated, and if the weather be very hot the infant should if possible be moved out-of-doors under the shade of a tree. Bathing and sponging constitute a very important part of the treatment, especially if there is much fever. Impress upon the nurse that a bath is not a luxury upon which the well-to-do should have a monopoly. Again, I want to reiterate, give plenty of pure cool water to drink. No doubt many of you have seen a wonderful change for the better take place after giving the babe a few drinks of water.

The whole pathological expression of this disease may nearly be summed up in two conditions, viz., defective digestion and malnutrition, hence the subject of dietary becomes an important desideratum.

Mother's milk, or that of a healthy wet-nurse, is the ideal nourishment for the infant, and those so nursed rarely fall victims to summer complaint. It is the artificially fed, and those who have suffered uncorrected predisposing influences, already alluded to, which furnish the greatest number of victims to infant summer complaint.

It frequently happens in these summer diarrheas the question is raised whether the infant should be changed from the source from which it has derived its nourishment (if it has been reared on the breast up to this time), on account of bad health, pregnancy, impoverishment of the mother's milk, or some other cause, to one of the many artificial infant foods on the market. The writer can only suggest that mother's milk is still to be preferred, unless it has been shown to have lost its normal constituency in so far as not to be nourishing. This is not to be determined by pregnancy, but by careful chemical and microscopical analyses. If this is not possible, and it is not as a rule, the physician should use good judgment and do some "scientific guessing" to determine the facts. Mother's milk alone possesses all the requirements for the upbuilding of the infantile fabric, in the carbohydrates, salts, and water. Many of the artificial foods claim to be identical with nature's food, but numerous able chemists have found variable results, often differing widely from the

manufacturer's published composition. The best of them, when made ready for consumption according to directions of the manufacturer, are only to be regarded as modifications of cow's milk. Under certain circumstances these foods act well.

It must be borne in mind that the infant is deficient in the digestion of starch, which requires diastatic ferments, and most of the artificially prepared foods contain starch. It might also be remarked in passing that the custom of giving the infant a taste of various things on the family table is pernicious, and it should be the duty of every physician to enlighten and educate his clientele in regard to these matters, and to especially emphasize the fact that the young infant cannot digest starchy foods.

Condensed milk, theoretically speaking, is out of the question, for it is deficient in fats and contains cane-sugar much in excess compared with human milk.

If mother's milk must be excluded, and a wet-nurse cannot be secured, in cow's milk we have the best substitute, remembering that mother's milk differs from cow's milk in containing more fats and sugar, and less proteids and acids; therefore cream and milk-sugar should be added, with an alkaline diluent such as lime water, sufficient to bring the compound up to the standard of normal human milk.

We have mentioned the food most suitable to the healthy infant; the next step is its proper administration during the disease under consideration. Withhold all food for twelve to twenty-four hours, and in its place give abundant quantities of cold water. You may add a small amount of brandy, whiskey, white of an egg, a little salt, etc. After the expiration of the fast, begin nourishing the infant sparingly, and so continue until much improved.

As to therapeutics, the first indication is to thoroughly empty the septic alimentary canal, which is best accomplished by small and repeated doses of calomel and ipecac. This compound is well retained by the most irritable stomach (by the way it may be the first thing retained), and by its stimulating effect upon the liver and intestinal glands, bile and intestinal secretions are poured out in abundance into the foul and fermenting canal. This may be followed with castor oil, if your judgment so dictates, in sufficiently large doses to thoroughly evacuate the bowel contents.

Generally an astringent is indicated, and the one most suitable is subnitrate of bismuth, best administered suspended in mucilage, sweetened with glycerin. It should be given in suffi-

ciently large doses to discolor the stools, and often enough to keep them colored.

Opium in some form (I prefer paregoric) should be given if there be much pain, tenesmus, and frequent efforts at defecation. It should not be given when there are cerebral symptoms present associated with offensive stools.

Another important point: do not incorporate opium with any other compound you may give the infant, but give it separately and for its effect, bearing in mind its indications are limited.

A METHOD OF DEALING WITH FRACTURES.*

BY J. B. TAULBEE, M.D., MAYSVILLE, KENTUCKY.

Under this title advocacy of mobilization in contradistinction to immobilization will be attempted. The theory is not tentative, neither can its application be regarded as an innovation in the surgical therapeutics of fractures, for the method for many years has been regarded by the famous French surgeon Lucas-Championnière as ideal.

The records of the Hôpital Beaujon and the Hotel-Dieu in Paris afford abundant evidence of the virtues of this, in the opinion of many eminent French surgeons, incomparable method. It is to a member of this association that the credit is due for first having advocated and practiced the Championnière method in this country. In a very able paper written by him and published in October, 1899,† in pamphlet form his personal experience in private and consultation practice is ably set forth: a number of cases reported at length, and an elaborate history of his observations during the years 1894-5 while attending the clinics of the Hôpital Beaujon in Paris held by the noted French surgeons Dagron and Lucas-Championnière.

Professor Gross has said: "There is no class of injuries which a practitioner approaches with more doubt and misgiving than fractures, or one which demands a greater amount of ready knowledge and consummate skill. Constant in their occurrence, and often extremely difficult of diagnosis and management, they frequently involve consequences hardly less serious and disastrous to the surgeon than to the patient himself."

*Read before the Kentucky State Medical Association, Louisville, 1903.

†Recent Methods in the Surgery of Fractures, Massage, and Mobilization. Read before the Mason County Medical Society, October, 1899, by T. E. Pickett, M.D.

If I were called upon to testify what branch of surgery I regarded the most trying and difficult to practice successfully and creditably, I should unhesitatingly assert that it was that which relates to fractures. There is certainly none which requires a more thorough knowledge of topographical anatomy, a nicer sense of discrimination, a calmer judgment, a more enlarged experience, or a greater share of vigilance and attention—in a word, none which demands a higher combination of surgical tact and power. As for myself, I never treat a case of fracture, however simple, without a feeling of greatest anxiety as to its ultimate issue, without a sense of discomfort, so long as I am conscious that despite the most assiduous attention and best directed efforts the patient is likely to be crippled and deformed for life. A crooked limb, whether rendered so by injudicious treatment or not, is an unpleasant sight to a sensitive surgeon, as it continually reminds him of his bad luck, neglect, or want of practical skill. More especially does it stand as a menace in this day of merciless prosecutions for malpractice. The records of the courts, not only in every State, but in nearly every judicial district in each State, furnish evidence of disastrous progress along this line. In my own county of Mason no fewer than three such suits appear on the records of the present court, aggregating in claim, for money damage, the sum of $25,000 against two physicians, and all for alleged mismanagement in cases of fractures.

Admitting that many of the unsatisfactory results are imaginary, or that the legal proceedings are prompted by unscrupulous lawyers, backed up by more unscrupulous doctors, and in not a few instances because of want of coöperation on the part of the patient, yet, excluding those cases which admit of no other result, however skilfully managed, is it not a fact that there are distinctly avoidable results which are a shameful reflection upon practitioners of the medical art? Where does the fault lie? Is it a faulty technique? or does the fault lie in the defective application of a sound and satisfactory method? In this era of specialism it implies no reflection upon the general practitioner when he refers his surgical cases to the surgeon; on the contrary, it is a commendable act. But it is not so with fractures; in such cases every physician is expected to be his own surgeon, therefore the study of this subject and a thorough understanding of the best means of dealing with these injuries becomes the more important.

Omitting any effort at a description in detail of the various forms of fractures and complications most frequently occurring

in long bones, coming within the purview of this paper, which would be trite, and without essaying to condemn any of the ancient methods or apparatus, which would appear in bad taste, we close this somewhat tedious preamble and come to the practical question of treatment.

Under anesthesia a correct diagnosis is made and the fragments are adjusted. In simple fractures of the lower limb all that is necessary usually is posterior and lateral supports with extension by weight and pulley. If a fracture bed is not at hand, or the apparatus of Hennequin, which is preferable to any other, this posterior splint or trough may be made from cardboard made to conform to the contour of the limb, reënforced by lateral supports made of dried sand or salt bags, pliable and not too heavy, which answer every purpose. The patient is placed in the most comfortable position, either sitting, semi-sitting, or prone dorsal decubitus, according to the character of the injury. No splint or roller bandage is necessary. In compound, comminuted, and complicated fractures, which are always serious, this open method becomes the ideal. In this class of injuries it is often safest and best, while the patient is yet under the anesthetic, to make free incision over the seat of the injury, free the wound of all detritius, irrigate and render the wound as aseptic as possible, remove all spiculæ and clots which threaten to interfere with the process of repair, and by manipulative skill replace and approximate every fragment which it is deemed safe to leave *in situ*, adjust the lacerated periosteum and soft structures, closing the wound either with or without drain, and suture and cover with light antiseptic dressing. Provision should be made for any subsequent irrigation and drainage which may become necessary. Usually, however, these open wounds will be found to heal very nicely. This procedure is all that is necessary for the first three or four days, after which the congestion and swelling will have greatly subsided. During this period the seat of injury should not be disturbed save by gentle massage and the application of some soothing lotion, which will stimulate the lymphatic and venous circulation and prevent the over-engorgement and congestion of the parts. If there is pain and muscular spasm, the hypodermic administration of morphine will prove to be very grateful.

Under the trained eye no fear need be entertained in this open method that the fragments are misplaced or that any of the structures are taking on unfavorable change, which would not unlikely be the case were the parts covered with cumbrous splints

and bandages ill applied. In making extension careful attention should be given to the proper adjustment of the adhesive strips, which should extend above the proximal joint below the seat of fracture—that is to say, in fractures of the lower leg the strips should pass well above the ankle-joint, and in fractures above the knee they should reach above that joint, in some instances should extend even above the seat of injury. One precaution which is often neglected is the limiting of the weight used in extending the limb. No greater mistake could be made than to apply too great weight. In fractures of the femur and humerus no better means of applying the adhesive strips could be adopted than to leave the leg and forearm free, whereby the elbow- or knee-joint can be flexed, extended, elevated, or lowered at will. Careful mobilization of these joints from time to time will prevent undue stiffening.

Besides, this motion will exercise the deep muscles about the seat of injury, contributing materially in dispersing of congestion and proper distribution of plastic material. No stereotyped rule can be followed as to the position of a broken limb, but it should always be one of rest, not only to the injured area, but to all surrounding structures. Take, for example, fracture of the shaft of the radius, which perhaps is followed by more unsatisfactory results in its frequent occurrence than any other fracture, yet when properly understood the treatment is simple and easy, and very nearly perfect results are promised when attention to detail is carried out. It is understood in this variety of fractures that the upper fragment is drawn forward by the biceps and rotated inward by the pronator radii teres to a position midway between pronation and supination. The lower fragment is drawn inward by the pronator quadratus; the supinator by elevating the styloid process depresses the upper end of the lower fragment still more toward the ulna, thereby separating the fragments, which are held apart and pinioned as it were by extending the arm. It will readily be seen that it would be impossible to reduce and retain these bones in the normal position with the forearm extended; obviously the best means of reducing this displacement is by fixing the forearm on the arm with the hand midway between pronation and supination, making counter-extension between hand and elbow, and retaining it in this position. In subsequent examinations, in redressing, or in passive mobilization, care should be taken to avoid extending the arm, as the muscles would be placed on such tension that the fragments would be drawn out of position, thereby undoing the work already accomplished.

In fractures of the shaft of the femur no better apparatus could be found than that of Hennequin, in which extension is made from the knee with the leg slightly flexed. This apparatus, however, being rather complicated and very expensive, by a study of its mechanism one can be improvised which will answer the same purpose. By the use of this apparatus mobilization not only of the joints but gentle mobilization of the seat of the fracture is easily accomplished, while the limb is retained in a most comfortable position. In the application of the apparatus the wire trough (gouttiére metallique), still used by the author, is dispensed with by his contemporary Chaput as useless; the latter leaving the thigh exposed the better to appreciate the direction and position of the limb during the process of massage and mobilization. No better description of this method of massage and mobilization can be found than is given in the paper of Dr. Pickett, previously mentioned.

There is nothing necessarily mysterious in these methods of massage and mobilization, and divested of technicalities they are comprehensive enough for all practical purposes. If the fracture be compound, all the fragments of bone and foreign bodies must be aseptically removed with the finger or forceps, such incisions or resections being made as are necessary to open the parts to treatment or to promote the necessary drainage. Sometimes a careful resection is required before the final adjustment is made. For simple fractures without displacement, or where the fragments are retained in position after reduction, massage is indicated at once, that form being employed which is known as effleurage. The empirical application of this method explains in a measure, no doubt, the immemorial popularity of the bone-setter or *rebouteur*. One of these irregular practitioners is said to have complained that he invariably got bad results whenever by accident or inadvertence he deviated into the methods of the regular school!

The most delicate application possible of the pulps of the fingers, previously oiled, immediate, methodical, vigilantly solicitous, and progressive massage, directed not precisely to the seat of injury, but to the surrounding tissues and adjacent parts. As the tenderness lessens and the pressure is increased, the contiguous parts are centripetally drained, the resilient tissues are gradually refilled, and the traumatic engorgement is completely relieved. This is the true gluco-kinesis—"*un massage doux et progressif; le massage Francais.*" This process of massage and mobilization is applied with perfect ease and invariably with

happy results. Pain is relieved at once by the soft anesthesiant touch; the circulation is quickened, and extravasated fluids are absorbed; muscles are relaxed; normal conditions of nutrition are restored; a supply of plastic material is secured; the process of repair is stimulated; the cure is hastened; function is preserved, and deformity is prevented. Whatever the apparatus used, whether weight and extension or lateral sand-bags, or the more elaborate apparatus of the French or English schools, the most successful treatment is obtainable only by *keeping the fracture perpetually under the eye.* Here eternal vigilance is the price of success; and certainly disgraceful failure is the penalty of neglect. Daily removal of whatever dressing may be applied, with appropriate massage and mobilization, is the indispensable condition of success. Regardless of whatever revelation the *x*-ray may promise, it must not be forgotten that radiography need have no terrors where the function of the limb has been preserved, and (as is now well known) its testimony is not conclusive, even when apparent displacement or deformity exists. Radiography, though useful, is at times dangerously misleading, and by no means to be assumed infallible by a jury or a court. We should remember, however, that the chief danger to the practitioner is—not radiography, but *immobilization.* Treatment by immobilization may secure an approximately perfect coaptation of fragments, but it is only massage with mobilization that can vitalize the tissues which preserve the functions of the limb, for the restoration of function is a consummation devoutly to be wished. In the one case, as Dr. Pickett expresses it, the problem to be solved is essentially *mechanical;* in the other *physiological.*

The original fixed mechanical apparatus of Desault, Curdon, Buck, or any other cumbrous dressing, such as plaster of Paris or metallic splints bound tightly to the limb by roller bandage, is rarely required and has often proved disastrous. This daily massage and mobilization should be practiced from twelve to fourteen days, when it will be found in the great majority of cases that all inflammation has subsided, swelling has disappeared, and an abundance of plastic material thrown about the seat of fracture. Callus being essential to reunion, it is at this time that mobilization at seat of injury should cease and absolute rest of the fragments be maintained. By constant massage —with light, uniform, continuous pressure—this putty-like material can be molded and distributed about the seat of injury in a manner which nature alone could not accomplish, and

within a very few days the bones are found to be reunited. After the end of the third week, when reunion has been accomplished, one can safely apply a fixed and permanent dressing, when the patient himself can begin to exercise the limb.

In closing let me again quote from the paper of Dr. Pickett: "To be thoroughly convinced of the value of the Championnière method as a surgical resource, one need but follow with intelligence the infallible fingers of Dagron as he plies his art in the ward of the Hôpital Beaujon. If one would test the method himself, let him observe the following rules: In ordinary fractures the massage ought to be made in the direction of the venous circulation, with a view to a *degorgment* or emptying of the congested tissues; as nearly as possible the manipulation ought to be painless; it ought to begin on the sound tissues above the point of injury and gradually descend to the congested or edematous parts; it ought to be soft and light at the beginning of the séance, more decided and even vigorous toward the close; an unguent ought to be invariably used, and only the soft, smooth parts of the hand applied. If the hand be rough, encase it in a soft flannel mitten well greased, or surgeon's rubber gloves." At the end of five or ten minutes apply suitable bandages; and, if necessary, a light, firm, smooth, well fitting support of binder's board or felt.

In compound fractures, of course, the necessities of drainage and other conditions will materially modify the character of the massage; and in all cases of fractures, simple or compound, when massage or mobilization is to be applied, the physician must be his own masseur, remembering that mere movement is not renovation, and that immobilization is not rest. In early mobilization especially there must be not the faintest suggestion of *brusquerie,* or the slightest tendency to excess; and the exercise of this sort of precaution is peculiarly important at the extremes of life—with the very young and the very old.

But the possibility of evil results from injudicious manipulation must not be construed as a prohibition upon the scientific use of the method described. As Lucas-Championnière remarked to his critical contemporary Péan, it does not necessarily condemn a method to say that it may be ill applied. Tried by that test, what method is good?

"But, after all, you say it is nature that does the work. Very well; nothing could be more pertinent, nor more true. It is only by a return to nature that we revive a decadent art."

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It is stated that a new plan for admission to the medical corps of the army has been approved by the Secretary of War, and will go into effect with the class next year at the Army Medical School. The class this fall will enter under the same examination as heretofore. The new plan for admission is to place on the list of eligibles for commission as assistant surgeons in the medical corps of the army all graduates of the medical school who shall have passed the final examination with a mark of 80 per cent or over. During their course at the school they will be paid $100 per month. The plan of admission calls for examinations, physical and mental, and candidates must be graduates of reputable medical schools, and have had at least six months' practice in hospital or the equivalent. The examinations are to be conducted under the supervision of a board of medical officers of the army, and candidates who pass the entrance examinations with a mark of 80 per cent or over will be entered in the school. The scholastic year is from October 31 to May 1, and graduates will be selected in the order of their standing for commissions.—*American Medicine.*

The plans for the first group of buildings of the New Harvard Medical School recently filed call for five buidings, fireproof, with white marble walls. The administration building, 166 by 124 feet, and five stories high, will cost $535,000; the physiologic laboratories, 196 by 148½ feet, three stories, $421,000; the laboratories for bacteriology and pathology, 185 by 128 feet, three stories, $390,000; histology and anatomy get a three-story building, 196 by 148 feet, and costing $396,000; while pharmacology and hygiene will be studied in a three-story building 185 by 108 feet, to cost $346,000. All are to be erected beyond the fens on Londwood Avenue, on the lot which extends through to Francis Street and Huntington Avenue.—*Journal of the American Medical Association.*

THE MEDICAL AGE.

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EDITORIAL ARTICLES.

INFERIORITY IN ORIGINAL RESEARCH.

In one of the chapters of Carl Snyder's brilliant and entertaining book on "New Conceptions of Science," the author somewhat severely arraigns America for the inferior position she has occupied in bringing about the recent advances of science. Not that America is without her brilliant representatives in all departments of research, and not that we have not had men who have done genuine and lasting work, but the list is too brief, considering the number and wealth of our institutions of learning.

Pasteur's discovery that fermentation was due to the presence of microbes has been probably one of the most fertile discoveries in latter days in opening up large fields of research. Applied to surgery, this discovery gave us Lister, and in medicine and pharmacy produced Behring and Kitasato. Through Pasteur's discovery diphtheria, tetanus, anthrax, and other scourges have been rendered almost innocuous. Hydrophobia has been robbed of its terrors. Yet in the brilliant list of discoveries and applications resulting from Pasteur's work no American name is to be found, though we have more so-called medical professors than any other country in the world.

The discovery of electric waves by Hertz was the fulfilment of Clerk Maxwell's prediction of the common nature of electricity and light, and out of this discovery came a host of workers. Lodge of Birmingham first applied it to signalling, and demonstrated the possibility of wireless messages. Branly of Paris made the delicate coherer essential to wireless telegraphy. Popoff, Rigi, Slaby, Arco, Guarini, Tissot, and Bose are a few of the names which lead up to Marconi. When the Atlantic had

been bridged no American name had been connected with the enterprise.

Metallurgy might almost be considered the basis of American industry. We have a billion dollar steel trust founded upon it, but from a dictionary of names of those engaged in the work of original research in this science Mr. Snyder has been able to find but two Americans, and the contributions of these were not particularly direct or important.

Nothing in recent years has so amazed the world as the peculiar properties of the cathode rays. Crookes long ago showed that the glow in a vacuum tube was due to streams of minute missiles; these, bombarding a fluorescent screen, produce the Roentgen light. Thompson of Cambridge has shown these missiles to be the smallest particles of matter known, and probably the stuff out of which all substance is made. Out of this discovery we may eventually build up matter at will. These "corpuscles" form the most gigantic discovery of the century, and the discovery has been made without American aid or coöperation.

So also in the physiology and pathology of the nervous system. From Golgi and Ramon y Cayal to Forel and Waldeyer, every land has had its representatives, and it is only in vain one seeks for America's contribution to the mass of accumulated knowledge.

In chemistry and electro-chemistry the same criticism prevails. The industries born of these sciences are worth millions of dollars a year to America, yet a list of the names of those who have built up these sciences would hardly include that of one American.

What is it that gives force to this indictment? Are the rewards of practical accomplishment, the adjustment of discoveries to the daily needs of mankind, too absorbing and too remunerative to permit of original labor proving attractive, or is it that the endowment of research has not been generously undertaken? It can be scarcely lack of brains on the part of the most progressive nation on the face of the earth. Foremost in all matters of practical adaptation, why are we behind in initiative research?

Research laboratories are being established everywhere, and yet from many of them comes the complaint that investigators are hard to enlist, and few seem to be animated by the desire to ascertain truth for truth's sake. It is to be hoped that wiser ideas will in the end prevail, and that America may take her true place in the ranks of future achievement.

EDITORIAL NOTES.

Susceptibility of Criminals to Atmospheric Changes.

The well known fact that atmospheric changes have much to do with the state of one's mind led an English physician, Dr. W. Norwood, to make an extended series of experiments into the question whether criminals were affected in the same manner as the average reputable citizen. Dr. Norwood in his report, which was published in a recent issue of the *Lancet,* shows that criminals as a class are insusceptible to such influences. The investigations covered a period of over three years, during which time he noted the direction of the wind, the air and outlook, the temperature in the shade, and the barometric height. The wind alone seems to have some slight effect upon criminals, but not enough to be of any consideration. Dr. Norwood contends that his investigations prove that criminals as a class are insensible to external impressions.

The Danger of Canned Foods.

From time to time reports appear in the daily press of poisoning from the use of canned foods. The use of these foods has become very prevalent of late years. All expeditions that are attempted into climates where food is difficult to obtain carry with them large supplies of canned foods. In cold climates little or no trouble with them has been experienced, but in the tropics the heat causes a maceration of contents of the tins whereby chemical changes take place, which in many cases render the contents unwholesome if not actually dangerous to those who partake of it. It would seem that the dangers of using food thus prepared might be avoided should each can bear the date of its preparation.

The Treatment of Alcoholism by Sea Voyages.

A very interesting experiment in the treatment of chronic alcoholism is about to be attempted by a number of English physicians. A steamer has been chartered, upon which no alcohol will be allowed, to make a two months' cruise through the Mediterranean. It is expected that the constant change of scene, together with the complete isolation from all wines or spirits, will afford lasting benefits to those attempting to break themselves of the liquor habit.

ITEMS AND NOTES.

THE yellow fever situation in Mexico is alarming.

A SEVERE epidemic of typhus is reported in the interior of China. Ten thousand persons have died.

PIETRO CARTONI, a rich Italian, has given $190,000 for a tuberculosis sanitarium outside the city of Rome.

FOUR HUNDRED cases of typhus are reported in two regiments of the Bavarian infantry at Hammelburg, Bavaria.

THE hospital statistics for Prussia show that the number of persons treated for lead-poisoning has fallen from 1624 in 1899 to 1383 in 1901.

THE Buffalo Academy of Medicine has taken up the crusade against toy pistols and dynamite explosives for the Fourth of July or any other time.

DR. ARCHIBALD N. SINCLAIR has been appointed a member of the Board of Medical Examiners of the territory of Hawaii, in place of Dr. C. L. Garvin, who has resigned.

SURGEON-GENERAL RIXEY has decided to urge on Congress the enlargement of the General Naval Hospital at Portsmouth, Va. The institution now has 200 beds, and he will recommend that it be enlarged so as to accommodate 500.

THE plague has made its appearance in the harbor of Marseilles. The authorities at first asserted that the existence of the plague had not been established, but they now admit that eight suspicious cases, five of which resulted in death, have occurred.

DR. NEUFELD, of the Berlin Institute of Infectious Diseases (Koch's Institute), reports that successful experiments have been made to produce immunity against tuberculosis by injecting into the blood of mules, goats, and cattle living bacilli from human beings.

PROFESSOR GUIDO BACCELLI, the distinguished physician of Rome, who at present holds the portfolio of agriculture in the Italian government, has been elected a corresponding member of the Paris Académie des Sciences in the Section of Medicine and Surgery in the room of the late Professor Ollier, of Lyons.

A PRESS BUILDER of Brooklyn has undertaken a forty-day fast to demonstrate that it is possible for a man to live and work well on a diet of water. He began the present fast on August 22, at which time he weighed 173 pounds. On a former occasion, it is said, he went without eating for nearly three weeks.—*Exchange.*

THE chemists of the Inland Revenue Department at Ottawa have just completed an analysis of 100 samples of canned vegetables. No chemical preservatives were detected in any sample. All save two were found in good condition. In two instances copper was found in peas, but only a trace, and there was no evidence that it was put there for the purpose of intensifying color.—*Exchange.*

THE Chicago board of review has decided that medical colleges operated for profit shall be taxed on their equipments. Rush Medical College was taken under advisement; Hahnemann Medical College was not taxed; Chicago Homeopathic Hospital was taxed on $4000; and the American College of Medicine and Surgery, Bennett Medical College, and Jenner Medical College on $2000 each.—*Exchange.*

THE president of the American Congress on Tuberculosis to be held in Washington, D. C., April 4, 5, and 6, 1905, announces Alfred Meyer, of New York City, consulting physician to the Bedford Sanitarium for Consumptives, to be chairman of a committee in charge of the section on sanitarium treatment of tuberculosis. It is probable that the climatic and other methods of treatment will be comprised under the work of this committee.

DR. DUATA, professor of hygiene at the University of Perugia, in Italy, says the *Medical Record,* published in a Milan newspaper a severe arraignment of the Pasteur treatment of rabies, which he says causes but does not cure the disease. Before the introduction of this mode of treatment, he says, the average annual number of cases of rabies in Italy was sixty-five, but since the institution of the Pasteur method the annual average has risen to eighty-five.

THE medical department of Kentucky University has decided to introduce what is known as the quarter system, by which a student may attend the school the whole year or at any time of the year. Two terms of three months each make up a year's course, but a student may begin with any quarter, or in fact attend all four if he wish. The authorities believe this system will be taken up by other medical schools.—*New York Medical Journal.*

Prince Frederick Charles of Hohenlohe has asked permission of the Portuguese government to erect vast sanatoria in Madeira. He has offered by way of payment to the State or to charitable institutions one-third of the net profits, in the meantime paying a deposit of $100,000. The Prince is said to be forming a company, with a capital of $10,000,000, which will undertake to open within two years two magnificent sanatoria in Madeira.

A photomicroscopic camera for taking pictures of food adulterants and their bacteria, and the microtome for cutting articles of food into infinitesimal pieces, have lately been used with success by the Department of Agriculture. Imported foods are now tested by the department in a microscopic laboratory established for the purpose, and many astonishing revelations have been made under the new regulations adopted by Congress.—*American Medicine.*

There is said to be a very curious and interesting class of epileptic cases noticed among the invalided soldiers who have returned from South Africa. The number of these cases observed in South Africa was astounding—over 2000, according to the report. The epileptic attacks were not caused by wounds, but by harsh, screaming detonations of modern firearms, particularly cannons, and by the explosions of lyddite shells. It is feared the epileptic attacks will be incurable.—*Medical Times.*

Newspapers state that Benjamin Hamrick, of Webster Springs, W. Va., and his nine sons beat the record for remarkable families. At a recent family reunion it was found that the aggregate height of the ten male members of the Hamrick family was 62 feet 3¾ inches, while the combined weight aggregated 1741 pounds. The shortest man was 6 feet 1 inch, and the tallest man 6 feet 5¾ inches; the lightest was the father, who weighed 155 pounds, while the heaviest was 226 pounds.—*Exchange.*

The Drexel Institute of Art, Science, and Industry of Philadelphia has recently instituted a new department of instruction, viz., a preparatory course for nurses to extend over two terms. Instruction is given in the elementary medical branches, anatomy, physiology, etc., as well as in cooking, gymnastics, voice culture, facial expression, English, etc. To those who complete the two courses satisfactorily a certificate of attendance will be given. For the first year a first and second prize of thirty and twenty dollars respectively is offered by Dr. S. Weir Mitchell for excellence in all the branches.—*Medical Record.*

Dr. George A. Soper, the expert appointed from the State Board of Health, has been investigating the subject of typhoid fever in Ithaca since March last. He states that there are now in the city nine cases, of which two are of recent origin, and five cases under suspicion. Cases have been attributed to an outbreak in a summer home above the intake of the city water-supply from Six Mile Creek. Nine-tenths of the citizens of Ithaca wish to have an artesian water-supply, but a powerful minority is backing what is considered to be an inadequate filtration plan.—*New York Medical Journal.*

It is said that oleo manufacturers have discovered a method of making the product that enables them to pay only the minimum tax of a fourth of a cent a pound, and that this is encouraging them to turn out large quantities. In June last a total of 2,572,234 pounds of oleomargarine passed the government officers at the rate of one-fourth of a cent a pound, and yet a large part of it is said to have been richly colored and easily marketed because of its appearance. The revenue officials were unable to detect any ingredient in it that would cause it to bear 10 cents rate for artificially colored goods.—*Exchange.*

The report of the Chicago Health Department for the week ended September 5 says the efficient work of the Milk Division in its supervision of the city milk supply is best shown in the week's report. A total of 918 samples, nearly a third more than ever before, were analyzed in the laboratory, with only 3.05 per cent below grade. Of these 672 were collected by the inspectors from receiving platforms, wagons, and shops, and 21 were found below grade, or 3.1 per cent. Of 246 samples brought in by milk dealers and private individuals, only 7, or 2.8 per cent, were below grade. The milk supply of Chicago was never before so satisfactory; it is unquestionably now the best in the country.

In his annual report as Commander of the Department of Texas, Gen. Frederick D. Grant renews the argument for restoration of the post exchange or canteen. The canteen, he says, is the enlisted soldier's clubroom, into which no vice or degradation can intrude. There the soldier is guaranteed certain privileges which, so long as not abused, prove a bulwark against the temptations and dangers that now surround almost every post in the army, and especially border posts. To close the doors of the soldier's garrison club and send him out into the haunts of iniquity and vice run by moral vultures is a wrong to the soldier as well as to the community in which the soldier is stationed.—*Exchange.*

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgical Treatment of Congenital Clefts of the Palate of Infants.

T. W. Brophy (*Brooklyn Medical Journal*, September, 1903) advocates the early operation of such deformities. He says that surgical shock is less because the nervous system of a young child is not developed, and it is not therefore capable of receiving the same impressions that it would later in life; besides, young children usually react better. Hemorrhage is very slight moreover; all mental impressions are eliminated—we all know that alarm and dread are amongst the most powerful factors in producing shock.

The operation should be made upon the palate before that upon the lip. It is a great mistake to commence at the oral opening and partially close the only aperture through which a subsequent palate operation must be made. The surgeon needs all the space that can be secured, which is none too much in a small child. The lip operation is comparatively simple and trivial, and it can be performed at any time; but the palate operation is made much more difficult if prior to that the lip has been closed. Should the intermaxillary bones protrude, they must not be removed, but should be carried back into their normal position.

Before the bones are fully calcified they may be bent or moved without fracture. Bone at birth is about one-half organic matter, hence the injury is really less in closing a cleft than it would be if the calcification were more complete.

If the muscles are very early brought into action they develop instead of atrophy, and hence a good velum is secured with plenty of tissue; whereas if the operation is undertaken later in life, after the parts are shrunken through their non-use, they can rarely be made to subserve the same purpose that organs which develop through natural employment can be made to. It is well known that muscular tissue is more perfectly developed through action; in instances of cleft palate none of the muscles of the velum can be normally employed when the parts are not united, and hence they remain in an immature condition through life. By operating at a very early age they are at once brought into use, and their development is proportioned to that of other tissues.

When the palatal processes of the maxillæ are united, the development of the bones of the alveolar processes of the upper jaw assumes a form nearly or quite normal, and when the teeth are erupted they will properly occlude with the lower ones, or nearly so.

Following early operations there is much less deformity, for all the tissues, bony as well as soft, develop naturally and according to accepted types. When the operation is postponed for a few years, it is very difficult to secure such results.

When the operation is made in early infancy the tissues unite, the nasal accent does not develop, and speech is normal when the time comes for learning to articulate. If the operation is not made until faulty habits of speech are acquired, it is with difficulty that they can be overcome, even though the muscular parts be made sufficient.

The Significance of Pain and Tenderness in Cases of Inflammation of the Appendix.

Mansell Moullin (*Lancet*, Aug 22, 1903) states that: (1) Absence of pain is no indication that the most serious mischief is not going on. On more than one occasion he has operated and found the appendix on the point of giving way in spite of the patient's protestations that he had never had more than a twinge of pain. (2) The initial pain of acute inflammation of the appendix which is so commonly referred to the umbilicus is due to the peristaltic action of the cæcum or of the appendix dragging upon the attachment of the peritoneum to the abdominal wall. This is especially likely to occur when the appendix is fixed by adhesions, or the mesentery is short or twisted upon itself. In one case of inflammation of the appendix in which Lennander was operating under local anesthesia, the slightest traction upon the anterior layer of the parietal peritoneum caused pain, which the patient spontaneously described as exactly like that which he suffered during an attack. (3) The cessation of this umbilical pain without improvement in the other symptoms is due to cessation of the peristalsis caused by the inflammation having spread to the muscular coat of the bowel. When this occurs the wall of the bowel is no longer able to contract, and this source of pain disappears. That this is so is shown by the fact which the author has often pointed out, that the cessation of the umbilical pain is coincident with the formation of a local swelling, which at this stage of the disease is due to the distention of the bowel and thickening of its walls by inflammatory exudation. (4) The development of local

pain, which as a rule precedes by some short time the cessation of the umbilical pain, means that the inflammation has spread from the appendix to the parietal peritoneum or to the postperitoneal cellular tissue. These are the only structures concerned (at this period of the disease) which are supplied with nerves capable of transmitting the sensation of pain. Absence of local pain does not indicate anything. Severe pain is of serious import, as it implies either wide extent or great severity of inflammation.

The Cause and Treatment of Hammer-toe.

A. Perass *(British Medical Journal*, Aug. 29, 1903) considers that the deformity depends on a paralytic contracture of the flexor muscle, due to some circumscribed cortical lesion. He supports this by reference to the common bilateral cases, and by two cases of his own in which the condition had begun in infancy and was accompanied by a slight but distinct stammer. He suggests the importance of more extensive observations. The operation which he advocates is as follows: By means of a semilunar incision in the convexity of the toe he cuts a cutaneotendinous flap, incises the capsular and lateral ligaments of the joint between the first and second phalanges, isolates the first phalanx and cuts off a sufficient portion of its head. He then cuts the flexor tendon half through by an incision at right angles to the tendon near its insertion, and by a longitudinal incision creates a strong "tongue" of tendon, which is brought up between the first two phalanges and sutured to the extensor tendon. He thus brings about an equilibrium between the actions of the antagonistic tendons. Finally, before suturing the skin he removes what is superfluous, as well as any callosity that may have formed. The operation is described as a modification and completion of that of Terrier, and the author states that the result is a radical cure.

Congenital Hip Dislocation.

E. H. Bradford *(Boston Medical and Surgical Journal*, Sept. 30, 1903) summarizes his conclusions as follows: (1) The resistance offered by the capsule to the correction of congenitally dislocated hips is not more important than that offered by the muscles. (2) The chief resistance to forcible abduction is from the strong tendon of the adductor magnus. (3) The resistance to pulling down the head comes from the hamstring group and the long tendon of the adductor magnus and iliotibial band. (4) The

resistant tissues can be overcome by small incisions at a distance from the hip. (5) In the lighter cases manual manipulative reduction is sufficient. (6) In resistant cases, mechanical force which pulls upon and abducts the limb, arranged so as to also directly act upon the capsule, is of assistance. (7) Where the tendon of the adductor magnus is so strong that an immoderate amount of force is needed in stretching it, it would seem advisable to divide the chief resisting tissues rather than to incur the danger of severely bruising the tissues by the force used. The division of the tendon can be done either before the operation of forcible correction or at the same time.

Significance of Albumin and Casts in Surgical Patients.

John C. Munro (*Medical News,* Sept. 12, 1903) says we should expect evidence of renal irritation in over a third of the surgical patients found in a municipal hospital. The mere presence of a trace of albumin, with or without hyalin and granular casts, unattended by other evidence of renal damage, should not influence the prognosis in surgical disease or operation. The presence, however, of albumin and casts should place us on the watch for other and more significant signs of organic degeneration which may prove serious obstacles to operation or satisfactory convalescence. Furthermore, albumin and casts alone are apparently no contraindication to the administration of ether. The age at which we must expect albumin and casts in surgical patients is under thirty-five years in over half the cases. The proportion in young and otherwise healthy children is probably as great as in adults.

Operation for Fracture of Spine.

John B. Murphy (*American Journal of Surgery and Gynecology,* September, 1903) says that when there is fracture with primary complete transverse paralysis, operation will do no good.

When there is irregular paralysis, even though it may eventually become complete, recovery usually occurs without operation.

When the paralytic symptoms are evidently due to hemorrhage operation is indicated; but it must be done at once.

If the paralysis can be ascribed to mere puncture of the cord or to simple pressure of fragments, operation is justifiable; but such cases must be extremely rare.

MEDICINE.

The Heart in Acute Disease.

J. M. Corran (*Journal of Pathology and Bacteriology,* August, 1903) says in acute disease generally the heart is liable to be affected in various ways, and all the different elements—muscle, endothelium, connective tissue and vessels—may be injured.

Alterations in the muscle cells constitute the most frequent and the most important change. Granular degeneration is almost always found, and has its results in a loss of fibril bundles and a marked weakening of the power of the heart. Fatty degeneration is not rare, but its connection with acute disease is not necessarily close, as it is more often produced by other causes which may have been active before the onset of the fatal illness. Hyaline changes are found occasionally, but rarely extensively. They are probably the result of concentrated toxic action, and their occurrence is often favored by vascular or other local conditions.

When the pericardium or endocardium is inflamed, there is grave interference with the muscle in the vicinity, an interference which is at once apparent, and may continue after the cessation of the acute attack.

The connective tissues may be the site of inflammatory or degenerative changes, the former of which may be the starting-point of chronic fibrous changes in the myocardium. Acute disease may affect the vessels in various ways, and be the origin of chronic degenerative processes in them.

The effect of acute disease upon the heart is thus wide-spread, and has an effect both during its continuance and after it has ceased to act, as it may be the starting-point of chronic changes which seriously interfere with cardiac action, and even lead directly to death.

Diabetes and Skin Diseases.

E. Saalfeld (*Deut. med. Woch.*, July 23, 1903; *New York Medical Journal,* Aug. 29, 1903) reviews this subject and points out the value of the persistent appearance of various cutaneous diseases in the early diagnosis of diabetes mellitus. It should be particularly emphasized that in all cases of refractory cutaneous affections the urine should be carefully and frequently examined for the presence of sugar. In their relation to diabetes skin dis-

eases may be divided into two classes: (1) those which occur only in connection with this disease and are therefore peculiar to it; (2) those which appear only as accidental accompaniments. The first class is very limited and includes xanthoma diabeticum, diabète bronzé, gangrena diabetica, bullosa serpiginosa, and dermatitis diabetica papillomatosa. The second class is very extensive; here we have as the most prominent furunculosis, carbunculosis, eczema, the various forms of acne, paronychia, pruritus, urticaria, etc. The cutaneous symptoms of syphilis must also not escape notice in this connection, for it is well known that this disease is frequently an etiological factor in diabetes. Extensive experience has shown that the local treatment of cutaneous diseases appearing in unison with diabetes is futile, and that in order to obtain satisfactory results in any measure attention must be directed to the constitutional condition.

Simultaneous Infection of Influenza and Typhoid.

Solkind *(Centralblatt für innere Med.,* 33, 1903) reports the following case of a double infection of influenza and typhoid. Shortly after two individuals were taken down with influenza and two others with typhoid, a patient living in the same house showed symptoms of rhinitis, cough, and fever; diarrhea followed in a few days, the liver and spleen enlarged, and lobular pneumonia set in; later roseola were demonstrated. Pfeiffer's bacilli were found in the sputum, and the Widal reaction was positive in dilutions of 1:50. After passing through a typical typhoid relapse the patient recovered. The symptoms were so decided for both diseases that it could not be considered a typhoid form of influenza nor an abdominal typhoid with ensuing complications on the part of the lung, but was a decided mixed infection, as was verified by the laboratory findings.

Genital Tuberculosis.

H. Targrett *(British Gynecological Journal,* August, 1903), in introducing a discussion on this subject at the recent meeting of the British Medical Association, said that in tuberculous subjects post-mortem anatomy showed that the genital organs were affected in 7.7 per cent of all cases, while at the Children's Hospital the proportion was as high as 7.5 per cent. Such disease was not primary, and the infection was either through the blood-

stream or peritoneal cavity, or from external sources, but tuberculosis of the external genitals was very rare. The tubes were affected in 90 per cent of all cases. The form of disease might be miliary, caseous, or suppurative. The diagnosis was difficult, especially when tubercular disease was not evident in other parts of the body. There might be amenorrhea, but dysmenorrhea was the rule, and generally there was pain in the pelvis. Caseous tuberculosis should be left alone; pus he considers implies a mixed infection, and the removal of the disease is often extremely difficult from the rottenness of the organs affected or of the adherent intestines, and is sometimes followed by rapid toxemia, but laparotomy with vaginal drainage when indicated is often beneficial. He exhibited with the magic lantern eighteen remarkable specimens of tuberculous tubes and uteri.

Influence of Perspiration on the Composition of the Blood.

Rzetkowski (*Zeitschrift für diatetische u. physik. Therapie,* Bd. vii) in his experiments demonstrated that by heating a large part of the body surface a dilatation of the peripheral blood-vessels was brought about with an increased flow of the body fluids out of the tissues into the circulatory system. This addition of fluid to the blood often exceeds the loss by perspiration; the specific gravity of the blood serum instead of being increased is decreased, as demonstrated by Grawitz. Simultaneously with the increase of fluids in the vascular system an increase in red cells takes place, although there is a relative decrease due to the proportionate increase of fluid. The author regards this as a self-regulating act of the organism.

The Bacillus of Syphilis.

Justin De Lisle (*American Medicine,* Sept. 19, 1903) draws the following conclusions:

1. This microbe is found in all patients during the secondary manifestations of syphilis.

2. This microbe is agglutinated or clumped by the serum of individuals with secondary syphilis, but no reaction takes place with the serum of healthy subjects.

3. This microbe can be grown after having passed through a porcelain filter.

4. The direct inoculation of animals with the blood of syphilitics during the secondary manifestations causes the production of a hard ulcer, involvement of the lymphatic glands, paraplegia, etc.

5. Inoculations of the laboratory animals with cultures of this microbe occasion special lesions comparable to those observed in syphilitics.

6. It combines with the special sensitizing body (sensibilitrice) generated in the organism of animals vaccinated with syphilitic products.

7. Cultures of this bacillus are without effect when inoculated into syphilitics.

8. Like syphilis in man, this microbe dies with the infected animal.

Bacteriuria in Children.

Mellin *(Jahrb. für Kinderheilk.,* 58 Bd., 1 H.) finds that bacteria in the urine of children are infrequently observed, and that the literature shows but eleven cases, of which ten were girls and one a boy. His researches demonstrate that this condition is rather frequent in young children, although infrequently observed, because of the difficulty in obtaining the urine. In the course of a year he gathered ten cases, whose clinical histories he reports. When the mother reports the urine of the child as having a disagreeable odor it is a valuable indication of this condition. Of his ten cases, five boys and five girls, nine were between the ages of five months to four years, and only one ten years old; none of the children showed a disease of the genitals. He isolated the coli communis, and in two cases the staphylococcus albus.

Pneumococcus Agglutination with the Blood Serum of Pneumonic Children.

Jehle *(Wiener klin. Wochenschrift,* No. 32, 1903) obtained the following results from six cases of pnuemonia, and controlled them with the blood serum taken from ten other diseases: Compared with the clinical histories the results showed in all cases ending in crisis a relatively high agglutination; the same cases showed a distinct leucocytosis and a marked reduction of the chlorides in the urine. The agglutination was demonstrated at the onset of the disease, and it remained constant until the crisis, after which there was a rapid decrease in the agglutinins, and as

soon as four days after the crisis the serum showed itself indifferent to the pneumococcus. These observations will probably prove to be of diagnostic value.

Hereditary Icterus.

Pick (*Wiener klin. Wochenschrift*, No. 17, 1903) reports the clinical histories of three sisters seventeen to twenty-four years old who suffered from birth from icterus. It is of interest, as the mother was similarly affected, as well as a sister of hers. In all three cases there was a distinct yellow discoloration of the skin and of the sclera. There was no biliary coloring matter or acids in the urine, and in all three cases the color of the feces was normal. The author believes that the icteric condition of these cases resulted from a communication between the lymph vessels and the bile ducts, or from hereditary insufficiency in the liver cells which resulted in a deficient bile excretion.

Autointoxication and its Relation to Disorder of the Nervous System.

B. L. Wyman (*Alabama Medical Journal*, July, 1903) says that autotoxemia is an etiological factor of great importance in many functional disorders of the nervous system; that these poisons produce symptoms by either lessening, retarding, preventing, or arresting the functional capacity of the nerve center by interference with the transmission of nerve impulses; that the disturbance involves both the central and peripheral neurons; that repeated and chronic autointoxication may lead to structural alterations in the nerve cells and fibers.

Differential Leucocyte Count in the Early Days of Typhoid Fever.

H. A. Highley (*Medical Record*, Sept. 19, 1903) says that many cases of typhoid fever, contrary to general supposition, show the characteristic differential leucocyte count within the first week of the disease. The definite value of the differential leucocyte count in the early diagnosis of typhoid fever is as yet problematical; but it seems certain that when used in addition to the total leucocyte count, more information may be obtained than by employing the total count alone.

THERAPEUTICS.

The Permeability of the Urethra for Certain Silver Salts.

At the recent meeting of the American Association of Genito-Urinary Surgeons, E. C. Burnett *(Medical Record,* Sept. 12, 1903) read this paper. He said that during the past four months he had undertaken a series of experiments to determine, if possible, the permeability of the urethral mucous membrane for certain silver salts, and although he had not concluded them, the results thus far had been so uniformly alike that he felt justified in presenting them to the society as a preliminary report. Argyrol was the salt he experimented with. As this salt is very soluble and readily washed from animal tissues, it was necessary to find some means of precipitating it in an insoluble form in the tissues, and at the same time to have the precipitate distinguished from tissue elements by its color. A solution of hydrogen sulphide slightly acidulated with hydrochloric acid was found well adapted for this purpose. This produced an insoluble black stain of dead tissues that had first been immersed in the solution. In the first series of these experiments the urethras of dogs were injected with solutions of the salt, the strength of which varied from one to five per cent. This was repeated for six days, and on the last day, after washing the urethras thoroughly so that no post-mortem staining could take place, the urethras were removed. The tissues were then immersed in a solution of hydrogen sulphide to fix the silver taken up by the cell, and were then prepared for the microscope. In the next series of cases silver nitrate was used. In the third series rabbits were used instead of dogs.

In all the experiments the results were the same. It was found that the silver solutions did not penetrate, only the surface of the top layer of cells showing a trace of silver in the form of a thin black line of silver sulphide, the result of the reduction of the residue of the two silver salts by the hydrogen sulphide left after washing.

Hypodermic Medication in Some Diseases of Children.

E. Monturiol *(Archives de Ginecopat., Obstetr. y Pediat.; Archives of Pediatrics,* September, 1903) urges the wider application of the hypodermic method in the treatment of the diseases of childhood. If properly administered, hypodermic injections

present marked advantages in children. The author employed hypodermic injections in a series of children in dispensary practice.

In some of these, children with rickets, the author used an injection of sodium phosphate, ten centigrammes being injected on every alternate day. The effects began to appear the eighth or tenth injection, so that the mothers wittingly brought their children to the clinic for further treatment.

In tuberculosis injections of sodium cacodylate (cacodylic treatment in the original, no specific drug named) in doses of three centigrammes, on alternate days, gave very satisfactory results. In visceral, pulmonary, and articular tuberculosis these injections produced an improvement in the general health and in the local symptoms.

In anemias injections of the double chloride of iron and quinine in doses of from one to two centigrammes on alternate days gave very good results. The arseniate of strychnine was used with positive success in injections in paralysis and paresis in children. In acute bronchitis and in tuberculosis injections of eucalyptol, guaiacol, creosote, and iodoform produced results which were not as satisfactory as those noted with the other methods here mentioned. In whooping-cough injections of carbolic acid and menthol have been employed by Anguera.

The best sites for these injections are the nates, inasmuch as these regions are least sensitive and least exposed to accidents of all kinds.

Administering Ether.

G. Morton (*Therapeutic Gazette*, Aug. 15, 1903) advises the following precautions before beginning administration:

Examine the urine, especially for albumin and sugar, and if either one is present the operator should be notified and his further decision awaited before starting the ether. Both ether and chloroform are irritants to the kidneys, ether the less so.

Examine the heart for any organic disease. If present it would not necessarily prevent the giving of a general anesthetic, if in the judgment of the operator the operative condition absolutely required it, but it would influence the etherizer in the particular watchfulness he would exercise in regard to the heart action and pulse during the course of the etherization.

Examine the lungs for same reason—the presence of pulmonary disease might require the selection of some other anes-

thetic than ether on account of the latter's irritant effect on the lungs.

Have the stomach empty—light breakfast of tea and toast, or such food as will be entirely digested by the time for operation (milk sometimes curdles and is not suitable as a rule). The presence of food in the stomach during etherization increases the nausea which in the majority of cases follows the use of ether, and in vomiting may also be inspired into the lungs.

Have the bowels empty—a dose of salts or some other laxative the night before the day of operation, an enema the morning of operation, and if operation is to be in the anal or rectal region, a second enema an hour or two before time of operation.

Have the bladder emptied an hour or two before the time for operation, unless, for some special reason indicated by the operator, this is not desired.

Count the pulse—the patient might have an abnormally rapid, slow, weak, or irregular pulse owing to disease or idiosyncrasy, and if not known the etherizer might be unnecessarily alarmed during the course of the etherization. Possible increased rapidity of the pulse from nervousness of the patient just before starting the administration of ether, and the struggles of the patient and the physiologic effect of the ether after starting, must be considered and allowed for if necessary.

Properties of the Syrup of Iodide of Iron.

M. C. Hoge (*Virginia Medical Semi-Monthly*, Sept. 11, 1903) says in the early stages of phthisis, if given in drachm doses three times daily, this drug promotes the secretions, acts as a diuretic to some extent, and the weight of the patient increases.

In the dry, rasping coughs and colds, which patients, with the advice of druggists, have attempted to cure by taking syrup of white pine or quinine and codeine, all the secretions tightly locked up, appetite gone, and constipation troublesome, 10 to 15 drops of the syrup of iodide of iron every four hours will soon relieve the congestion and expectoration will be abundant.

In amenorrhea and dysmenorrhea in scrofulous women especially the iodide has a most happy effect, the menstrual flow in cases of amenorrhea often being soon established; the dose here indicated is 30 drops three times daily.

In anemic patients suffering from chronic rheumatic gout, one drachm, given with pure cod-liver oil, often proves of very great benefit.

In constitutional syphilis, where there is evidence of cachexia, the iodide is a valuable remedy.

Pale, strumous looking children, with enlarged cervical lymphatic nodules, associated with chronic catarrh of the throat or enlarged tonsils, are much benefited by the use of 10 drops of the syrup after each meal.

The Value of Confirmatory Cultures in Diphtheria.

John S. Billings *(New York Medical Journal,* Sept. 12, 1903) advocates the making of repeated examinations of the throat exudate in cases of diphtheria. He says that a certain small percentage of cases of true diphtheria fail to show diphtheria bacilli on first culture, this failure being due in many instances to a conjoined infection with the septic micrococci. With the exception of these cases, the statement that a case is probably not diphtheria can be made on one negative culture up to the tenth day of the disease.

Valid reasons for requesting a confirmatory culture in negative cases are: (*a*) Cases showing no growth whatever on the culture medium; (*b*) complete contamination and liquefaction of the culture medium, in cases which are clinically diphtheria; (*c*) cases showing the presence of suspicious or diphtheria-like bacilli; and (*d*) croup cases in infants or children, where the membrane is limited to the larynx, and the duration of the disease is less than five days.

Dryness of culture medium, scanty growth in culture medium, and recent use of antiseptics, with satisfactory growth of other organisms than diphtheria bacilli, do not alone furnish sufficient grounds on which to request a confirmatory culture.

The Curative Effect of Strychnine in Polyuria.

Feilchenfeldt *(Deutsche med. Wochenschrift,* No. 31, 1903) reports two cases of polyuria which were treated by injections of strychnine. The first case was accompanied by a slight hypertrophy of the prostate and paralysis of the bladder. The patient voided 3000 to 3200 cubic centimeters of urine daily with a specific gravity of 1010. There was no sugar nor casts. There was thirst, with a dry, cracked tongue, and occasionally uremic symptoms presented. He began with injections of strychnine nitrate .0025 gramme daily, increasing to .01 gramme, with the result that the quantity of urine was rapidly reduced to 1400 cubic centi-

meters. After twelve days' treatment the strychnine was discontinued, and the improvement in the amount of urine remained constant; the thirst and dryness of the tongue disappeared. The author reports at length a similar case with good results.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Birth Palsies.

M. H. Bochroch (*New York Medical Journal,* Sept. 19, 1903) says that in spontaneous labor one should not (in making traction upon the head) be in too great haste to deliver the trunk. The latter should be left to nature, or should be helped by means of expression. Only in cases of necessity should traction upon the head be made, and even then the head should be flexed laterally only so much as is absolutely necessary to conform to the necessity in the case. If it is found necessary to hook the axilla, too great traction should not be made.

During extraction by means of forceps, expression should be used as an assisting factor, presupposing that the shoulders meet with an obstacle at the entrance of the pelvis. One should remember Walcher's hanging position, and bring the forceps not far outside of the direction of the axis of the body. By this, however, is not meant that the slight pendulum movements sanctioned in text-books should be omitted. Danger only arises when there is a deviation from thirty degrees, but a slight pendulum movement is not prohibited.

During extraction by means of the feet, the arms should be quickly attended to, in case they are interfering, by means of Maurinceau's procedure—*i.e.*, by placing a finger in the mouth of the child and using the arm to assist in the traction, resorting in grave cases to expression, and if necessary to Walcher's position.

If the extraction of the head offers considerable difficulty, this may be considered as an indication for the application of the forceps to the after-coming head, in order to avoid stretching the nerves of the axilla.

The treatment of brachial palsies may be both surgical and medical. The resulting palsy is sometimes so serious that the

expedient of exposing the brachial plexus should be fully considered. It is not impossible that in some of these cases nerve strands are actually torn across. In such cases nerve suturing would be indicated. Whether it could be carried out in practice is a problem for the surgeons.

The treatment of a brachial palsy, when once established, resolves itself into the employment of massage and electricity. How limited the results are is well known to all. In some cases, it is true, brachial palsies disappear more or less markedly, but this is not the rule when the condition is present in a typical degree. In this connection it should be added that the arm must not be allowed to hang helpless at the side, but should be supported in a sling or a Valpeau bandage.

Gastric Troubles Resulting from Inflammation of the Female Genital Organs.

D. Liopel (*British Gynecological Journal,* August, 1903) declares that statistics show more than ninety per cent of those women who have hypogastric trouble suffer from gastric disturbance also. The cause of the latter may be either reflex or mechanical. In the former case, nervous gastric disorders are set up by the genital affection; in the latter, adhesions formed between the great omentum and the peritoneum of the inflamed organs in the small pelvis exert a drag upon the greatest curvature of the stomach, which causes not only the descent of that organ, but also a kinking of the duodenum. In reflex cases treatment should be directed to improving the general health; in the others the adhesions should be separated after laparotomy. Drainage would of course be contraindicated.

Ovarian Tumor of Bronchocele Type.

Meyer (*Centralbl. f. Gynäk.,* No. 24, 1903) exhibited last spring before a German society an ovarian tumor removed by Mackenrodt, which he described as struma ovarii colloides, because of its absolute histological identity with bronchocele. In this case the thyroid gland was healthy. There were, however, pieces of bone in the tumor, so that Meyer considered the new growth came under the head of teratomatous "struma," like Gottschalk's folliculoma ovarii malignum. Changes in the nuclei of plasmodial cells with ultimate breaking down into fluid were observed, and the tumor contained iodine.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D.,
Attending Neurologist to Harper Hospital.

Myoclonus Multiplex.

In an interesting article with the above title in the August number of the *Journal of Nervous and Mental Diseases,* Dana reports a number of cases, discusses the different types and classifications of myoclonic cases, and suggests the grouping of the myoclonias as follows:

1. Myoclonia of Friedreich, or peripheral type, including myokyenia.
2. Myoclonia of the functional or hysterical type.
3. Myoclonia of the convulsive tic type, this last type being characterized by many associated spasms, choreic or tonic.
4. Myoclonia of the degenerative chorea or family or myoclonus-epilepsy type, which is closely related with the third.
5. Myoclonia of the type of the infectious and symptomatic choreas.

"Although there is sometimes a mixture or fusing of the above groups," he says, "they are essentially different disorders, and as a rule can all be easily recognized and easily distinguished from each other. All cases of paramyoclonus multiplex, reported as such, can be grouped in one or the other: hence there is no need of that much misused term."

Camphor in Epilepsy.

As long ago as July, 1902, Bourville and Aurbard reported in detail in the *Archives de Neurologie* (Paris) a most interesting series of three cases, all of which had been long under observation and treatment with the bromide of camphor, and with the happiest results.

Case 1 was one of symptomatic epilepsy, and here there was progressive diminution in the frequency of the vertiginous attacks, and finally their disappearance altogether.

Case 2 was one of idiopathic epilepsy, which made an excellent recovery; and in Case 3, one of imbecility and symptomatic epilepsy, while recovery may be said to be questionable, there was certainly great improvement.

These three cases are cited because so long under treatment, and on account of the detailed observations recorded. Other cases attest equally the efficacy of the bromide of camphor in the hands of these observers.

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ORIGINAL CONTRIBUTIONS.

THE MISCHIEVOUS IN MIDWIFERY.*

BY W. P. MANTON, M.D., DETROIT, MICH.

Since Wertt, of Hamburg, in 1522, dressed as a woman, crept into the darkened lying-in chamber in order that he might study at first hand the then little known mechanism of delivery—and was afterward burned for his temerity and thirst for knowledge —the universal conception of the obstetric art has undergone most radical change.

From an ignorant, empirical practice, midwifery has developed into one of the important scientific branches of medicine, and demands of the accoucheur a knowledge, skill, and experience hardly exacted by any other department of the healing art. But unfortunately, while the requirements of modern midwifery are greater than those of any of the other specialties, the recent graduate from the medical school finds himself handicapped by an almost total want of practical knowledge of the subject, and as a result as he wins out his own experience, he is exceedingly liable to fall into lax methods, mischievous practices, and errors of judgment. Happily, nature is kind, and in the majority of instances delivery of the parturient woman is effected with but few demands upon the skill of the attending physician.

It is, however, the simple matters which are too often neglected because simple, but the lack of attention to which so frequently leads to remote and unexpected trouble. Old Dr. James Jackson quaintly says that "you cannot make a fire burn well if you put the wood on the andirons with a feeling of indifference;" so the neglect of details in the obstetric art, although success may at first attend, will ultimately breed disaster in puerperal disorders, slowly developing infantile derangements or genesic ills.

*Read before the Saginaw County Medical Society, Oct. 14, 1903.

There is no consultant of experience but will bear me out in these statments; and as these common faults are of every-day observation, it has seemed to me that the discussion of some of these ordinary and homely questions in midwifery might not prove entirely unprofitable. For the most of us are too apt to turn our energies and efforts toward the extraordinary and the new, to the detriment of the commonplace and the familiar. I shall therefore, with your permission, take up some of the every-day conditions incident to pregnancy, labor, and the puerperal state, in which mischievousness in practice or neglect is of common occurrence.

Pregnancy being a physiological process, as a rule attended only by minor discomforts, the practitioner is inclined to be indifferent to a systematic supervision of that period of the reproductive act, and to consider lightly the sufferings of a condition which, at best, is fraught with much discomfort and annoyance. Want of attention to the ordinary functions of the body during this period not infrequently leads to unnecessary distress and sometimes to harmful results. In consequence of the generally marked impetus inaugurated by the enlarging ovum, the secretory and excretory functions of the body are greatly enhanced, and derangement of the one or the other cannot but exert a baneful influence on general somatic well-being. Thus, constipation resulting from pressure, displacement, and inhibited peristalsis of the intestines may not only give rise to increased discomfort by adding to the bulk of an already overcrowded abdominal space, especially during the later months of pregnancy, but the stowing away and absorption of effete material leads to conditions of general malaise and autointoxication, and, worse than all, throws an increasing burden upon the overworked kidneys. Should the patient escape the more serious ills, the contents of the overloaded rectum pushed before the advancing head of the child not a little increases the dangers of infection during labor, not to mention the disgusting predicament in which the physician finds himself placed at the crucial moment. A little care during the nine months of pregnancy will save the woman from possible harm, and obviate annoying conditions during labor which cannot be allayed by the regulation dose of oil or enema at the lying-in.

In spite of the warnings of current medical literature and textbook teachings, the importance of frequent examinations of the urine during pregnancy seems not yet to be fully appreciated by many, and these careless individuals are consequently frequently surprised by the sudden advent of disastrous symptoms at or near

the time of labor. Only by a knowledge of what the kidneys are actually doing can we be forwarned against the development of serious complications and in a position to forestall their occurrence. At least monthly examinations of the urine should be made, microscopical as well as chemical, from the beginning of pregnancy until term. In from five to ten per cent of pregnant women albumin is present in the urine, but as this is often due to the admixture of vaginal discharge, and is not the result of kidney insufficiency, a microscopical examination is necessary to prove the absence of pathological conditions. The presence of casts, however, should always excite suspicion, and the case should thereafter be watched with increased solicitude, appropriate dietary and medicinal remedies being administered as occasion demands. But as neither albumin nor casts may be present, and yet serious toxemia arise, the importance of urea estimation also must not be overlooked, in that its marked diminution may be the only indication for the induction of premature labor before the development of fatal symptoms, when assistance will be too late. The liberal ingestion of large quantities of water during pregnancy, in order that the renal apparatus may be thoroughly flushed, is of exceeding importance, but is too often forgotten by the busy physician in his routine work. As many women object to drinking ordinary water, their imagination may be tickled and the desired results obtained by prescribing any one of the numerous simple mineral waters on the market.

When it is found that the action of the kidneys is actually embarrassed and threatening symptoms supervene as a result, the induction of premature labor should not be postponed too long. I am convinced that many lives are annually lost because of lack of courage on the part of the physician to resort to vigorous measures sufficiently early in the presence of imperative symptoms.

In the early months of pregnancy there are but two methods of emptying the uterus which may be considered good practice—the rapid dilatation of the cervix by steel instruments or Hegar's dilators, with evacution of the uterine contents by the finger, curette, and ovum forceps, and by electricity. In the later months rapid dilatation by the same instruments in imperative cases, or the use of Barnes's bags, the balloon of Champetier, or by Krause's method in cases which do not demand haste. All operations of this nature should be conducted with most scrupulous asepsis, and under anesthesia if necessary, in order to insure the greatest safety to the woman. The induction of labor when the fetus is dead is always right and obligatory. In this procedure,

the induction of labor, mischievous methods are frequently resorted to, even when easier and simpler means would bring about the desired results. This is oftener done to impress the members of the patient's family than with a view to successfully relieving the patient herself.

In a recent case where a physician had rightly diagnosed a dead child, a large quantity of water was injected into the uterus, presumably with the idea of separating the membranes and thus exciting uterine contractions. The results in this instance were all that had been expected and plus. As the result of the shock to the nervous system the kidneys promptly shut down and refused to work for some hours, and this, together with the retention of small remains of the secundines, came near terminating the patient's life, and led to a protracted and depressing convalescence.

Diet, clothing, exercise, and rest during gestation are matters of the greatest importance to the future mother, but are usually considered as of too trivial a nature to elicit the careful attention of the physician. Hirst relates a case in which the patient barely escaped with her life as the result of indiscretion at a Thanksgiving dinner, and every practitioner of experience has seen cases in which the beginning of a kidney disorder could be traced to exposure or physical overexertion.

The lightly passing over of the aches and pains experienced by the pregnant woman is evidence on the part of the physician of a want of sympathetic interest, which many patients resent. While it is true that we are impotent to allay much of the suffering which some women undergo from displacement of the viscera, pressure, stretching of the abdominal skin, gastric disorders, and other conditions, still where these become an actual burden and source of daily misery, it is our duty as craftsmen of the guild to attempt some alleviation of the distress. Often these efforts are rewarded by partial if not complete success, for even if our prescriptions fail to bring the desired relief, the mental effect of the effort is not without its benefit.

When the ovary is pressed between the expanding uterus and the abdominal wall, or the forward pressure of the organ almost threatens to burst the skin, a well adjusted bandage or support will be often promotive of the greatest comfort and relief, and the inunction of fats or stimulating ointments will sometimes serve to bridge the patient over until delivery ends the annoyance. In cases of hydramnion, where the distention is so great as to seriously interfere with the heart's action and respiration, the amount of liquor amnii may sometimes be diminished by copious watery evacuations from the bowels induced by saline laxatives.

While the continued use of hypnotics is not advisable during pregnancy, the sleeplessness which so often accompanies this condition must be combated to prevent the possible disastrous effects on the nervous system and the mind. When this cannot be regulated by diet and exercise, the use of the milder remedies is not objectionable. In my hands chloretone has proved of exceptional service in this condition, and has been followed by no disagreeable after-effects.

By the systematic study of our patients during pregnancy we may accomplish much in lightening the tedium and burden of the long months of uterogestation, and in so doing also prevent the possibility of future complications and the unexpected occurrence of undesirable and untoward results in the instance of both mother and child.

Labor.—The first stage of labor is often one of acute suffering, especially for the woman with "nerves," and is always particularly trying in that the pain seems unproductive of results. In many instances, in consequence of the preceding suffering, the woman arrives at the second stage of delivery in a state of utter exhaustion and prostration, rendering her absolutely unfitted to meet the demands of the expulsive period—a time when her cooperation is generally of no little importance. The result is inefficient uterine contractions, a dragging labor, an unmanageable or even frenzied patient, and a final resort to forceps, not only for the delivery of the child, but to extricate the physician from a temporary purgatory. It is mischievous practice to permit the patient to fall into such a state as just described, as unfortunate for the physician, perhaps, as for the woman, for, worn out by the importunities of the parturient, the former, rasped and bleeding in every nerve, is unfitted to give his best judgment and services at a time when these are most required. The wise administration of such sedatives as chloral hydrate or the hypodermic injection of morphine will quiet the woman's sufferings and induce sleep, from which she awakes strengthened and ready to resume the trials of delivery. While this course of procedure may temporarily stop the uterine contractions and in this way delay the labor, the compensation is adequate.

One of the mischievous practices commonly noticed is the permitting of a prolonged second stage. When total or nearly total effacement of the os has taken place, in the presence of good pains, or when the uterine contractions are too feeble to produce results and no advancement of the fetal head is made within a reasonable period of time, say one hour, the application of the

forceps is both warrantable and humane, and their judicious use is far less injurious to both mother and child than the so-called waiting method. Not only does this intervention of art relieve the mother from continued and useless suffering and put an end to fruitless efforts at natural delivery, but, as recently pointed out by Bochroch (*New York Medical Journal,* Sept. 19, 1903), by obviating the prolonged pressure on the fetal head it prevents such lesions of the brain as in the future give rise to hemiplegias, microcephaly, porencephaly, and hydrocephalus. The dread and objection to forceps delivery among the educated and intelligent classes is fast passing, and many women from experience or hearsay now request their use at the earliest reasonable moment.

Retarded labor, in the absence of pelvic deformity or maternal new growth, with good pains, can result from but four causes hydramnion with tough membranes, rigidity of the maternal soft parts, fetal deformity, or a short cord, either from abnormal development or from coiling about the child's body. In either instance the termination of labor is desirable, and should be brought about without injury to either mother or child.

In the use of the forceps the error most frequently noticed is the failure to diagnose the exact position of the child's head with reference to the diameters of the pelvic canal, an unrecognized, incomplete rotation resulting in a pulling and hauling by the physician which is not only unnecessary but quite unjustifiable. Under these conditions the feet are braced, and the fetal head is dragged through a tract which is wholly unprepared for the exit of the passenger, greatly to the detriment of both patients. When the position of the head is correctly appreciated and the forceps carefully applied, steady traction by the forearms is all that is required. In order that the sometimes excessive pressure of the blades upon the fetal head may not be constant, but intermittent, it is always important to bear in mind that the forceps should be unlocked, or at least the handles widely separated, during the interval between tractions.

In regard to the frequency with which the forceps should be used, I think it may be safely said that the larger the experience of the accoucheur the oftener resort to the forceps will be made. In the hands of the tyro this useful instrument may unquestionably become a source of much danger, but with the expert it is an aid of the greatest safety, value, and blessing.

In the delivery of the head proper perineal support prevents laceration of the perineal body in the great majority of cases, the accident occurring as a rule either because the head is allowed

to press through the vulvar ring before the parts have become properly relaxed, or as the result of holding the head back until the tissues have become softened and edematous. The happy mean lies between the two. Occasionally practitioners are heard to boast that lacerations of the perineum never occur in their cases. Such statements are absurd on their face, as not even the most skilful can escape this accident. In many instances the yielding of the tissues begins high up in the vaginal tract, and as the head is expelled, it plows through the structures, and tearing of the perineum occurs in spite of the attendant's best effort.

In this connection the little operation of episiotomy is too little practiced; by it many a perineum is preserved which might otherwise be sacrificed. But danger to the perineum is not as greatly to be feared from the escaping head as from the shoulders. Forgetting this fact, it is customary for the practitioner, as soon as the head is born, to make traction on this member in order that rapid delivery of the trunk may follow. This is a great mistake, as the tissues should be allowed to regain somewhat of their tone after the stretching produced by the cranial circumference. After delivery, the child's head should be supported until returning uterine contractions indicate that nature is again ready to complete her work. The child may turn blue in the face, but unless other indications for speedy delivery arise this will result in no harm. The dangers to the child resulting from traction on the neck and pulling on the shoulder by the finger hooked under the axilla, according to Bochroch, are not always evident at the time of delivery, and frequently do not receive attention until years afterward, when the patient comes under the observation of the neurologist. Bochroch's review of the histories of cases in the nervous clinics of the Jefferson Hospital shows that palsies "occur more frequently in the practice of the general practitioner than in the hospitals and wards attended by professional obstetricians," the reason for which being "the character of the people among whom the general practitioner practices, and the absence of both the opportunity and facilities for the exercise of skill." Erb-Duchenne's paralysis, summarized by Carter, is caused by (1) pressure in the neck from the blade of the forceps, the finger, or hook; (2) overextension of the arms; (3) pressure in the axilla in extracting.

In the delivery of the after-coming head, want of attention to or ignorance of methods, and too energetic efforts on the part of the attendant, not infrequently result in the giving way of the tissues of the neck, the head being left behind *in utero*. Several

instances of the kind have come under my observation. There is no remedy for the prevention of such unnecessary bungling save a more careful study of the various methods laid down in the text-books.

Puerpery.—The puerperal woman occupies a position intermediate between health and disease, and it takes but a slight turn of the scales to precipitate well-being into serious illness. Fortunately for womankind, Dame Nature has a firm grasp on the balance, and only in occasional exceptions does the index deviate from the norm. With existing knowledge of the wonderful resources which the organism has at its command for the prevention of and in combating disease, it becomes a question of most serious moment as to when and to what extent art is justified in proffering her services. How far may the attention of the accoucheur to the puerperal woman be extended without becoming meddlesome and interfering with the natural processes which make for health, and which checked may weaken or lose their powers for good? The puerperal uterus has been compared to an amputation stump. What does good surgery demand in the interest of the patient in the after-treatment of such a condition? First of all, cleanliness, called asepticism, then the prevention of hemorrhage, then good drainage, if there be discharge, and lastly rest—for rest, as Hilton says, "is the necessary antecedent to the healthy accomplishment of both repair and growth." In the successful practice of obstetrics the experience of centuries and the more recent discoveries of science have taught that absolute cleanliness is as essential in the midwife's art as in the surgeon's craft, and modern methods have conclusively demonstrated that prophylaxis is of utmost importance. Every lying-in woman should, therefore, be treated on the same principle as is a major surgical case: she should be made clean before delivery, she should be handled by sterile hands and instruments during delivery, and she should be kept clean after delivery.

With the advent of the antiseptic period it was believed that nothing could be clean unless deluged by a flood of chemical lotion, or sprayed with showers of germ-destroying agent, and so no woman could be delivered of a child unless the vagina was first thoroughly douched with antiseptics, and afterward the same must be repeated to insure a safe puerpery. This was bad practice, but it is still adhered to—fortunately by a decreasing few. Douching before delivery has the disadvantage of washing away the normal secretions, of producing possible injuries to the vaginal mucosa, through which morbific germs may gain entrance

to the system, and particularly in failing to remove pathogenic bacteria which lie hidden in the deeper folds and sulci of the vaginal tract. After labor not only do these last three objections obtain, but there is added the increased danger of conveying septic material to the very part which we are attempting to sterilize. The parturient tract of the puerperal woman should be left most strictly alone in normal cases, save for the cleansing of the external genitals. In puerperal infection the tendency to meddlesome interference is stimulated by the erroneous idea that continuous tinkering must produce favorable results and save the patient.

Roughly speaking, if the source of the infection is limited to the uterine cavity, as it most frequently is at first, a single thorough cleansing of the part, by curette and intra-uterine douche, will accomplish all that can be hoped for by such means; and further interference along these lines is not only pernicious and harmful, but positively adds to the dangers amid which the patient is struggling for her life. It has been my unfortunate duty in consulting practice to witness the death of too many women resulting from this irresistible impulse of the physician to be constantly doing.

In the foregoing remarks I have attempted to call renewed attention to a few of the commoner mischievous elements which enter into the practice of obstetrics—errors of omission as well as of commission; and as it is the little things of life which make for perfection and success as well as for disaster and failure, possibly the repetition of a twice-told tale may not prove amiss.

32 Adams Ave. W.

THE PHYSICIAN AS A FINANCIER.*

BY R. W. GILLMAN, M.D., DETROIT, MICH.

Why is the average physician so habitually incompetent in the financial world? This is a question which it seems to me should receive a closer study from every medical man than he may be disposed to give it. It is a notorious fact that professional men in general, and doctors and clergymen in particular, are poor business men.

In the case of the physician I believe there is every excuse for him, as he is encouraged from the very start of his medical career to practice medicine and surgery not so much for the money he

*Abstract of address delivered as retiring president of the Detroit Academy of Medicine.

may gather, as for humanity's sake, the honor due his profession, and the love and devotion of his patients. This sentiment I heartily approve of, and I am proud to belong to this most noble calling, that reaches nearer the human heart than the church itself. Our responsibilities are tremendous in this direction, and our services can never be measured by filthy lucre.

Unfortunately, the majority of medical men depend upon the income derived from their practice to pay the constantly increasing living expenses of to-day for themselves and families, and so they are forced, from necessity, to collect this money from their patients. Now, while I have not the least sympathy with anything that savors of "commercialism" in medicine, I do believe it is about time that the profession inject a little "horse-sense" serum into its members, so that they can use it to their own advantage both in the collection of fees and in the management of outside investments.

As regards medical fees, I shall not attempt in this short paper to probe very deeply into so important and delicate a matter. However, I cannot omit reminding you all of the want of system displayed by the profession as a whole in recording medical charges. In investigating why we physicians have such loose business methods in regard to our own work, the reason can readily be seen, when we consider that we have never had the benefit of any training, early or late, on the financial side of "professional services rendered." In my opinion the proper place to impart this knowledge is the medical college, when the senior student should be taught, as a branch of his work, the best methods of keeping a money as well as a medical record of his cases; and which should include the proper charges to be made in any given case. Many a young practitioner, through ignorance of what should be a just fee, has done himself untold harm by rendering a bill that was excessively high for some minor operation, or asking a ridiculously low fee for the care of some important case. He innocently stamps upon his reputation the name of being either a "money-grabber" or a "cheap" doctor, and generally acquires the latter title. Apropos of this, I relate the following, which was recently told me by the chief surgeon of one of the great railway systems of Michigan: A few months ago an employee of the company suffered a dislocation of the shoulder; a doctor living in a small town attended him. The dislocation was reduced under anesthesia, a report of the case with a diagram of the injury was made to the surgeon-in-chief, and last, but not least to the surgeon, a bill was enclosed for the enormous sum of two dollars!

It is a grave mistake for medical men to believe the profession is belittled and commercialized if business methods are introduced for the collection of their just bills. The reverse is really the case, for the cause of scientific medicine must be advanced, if physicians can smoothly and surely place themselves in some sort of an independent state, so that they have more leisure for research and study, and at all times be able to show their devotion to the afflicted poor, whom, thank God, it is our privilege to serve!

Everything considered, it really should cause no wonderment that the doctor is such an easy prey in the commercial world. If one but remembers he has never had any general business training, has no complete system of keeping a financial record of his professional work, and, in fact, takes a certain pride in his own loose business methods and lack of acquisitiveness, the wonder is that he ever accumulates enough money from his practice, after paying his living expenses, to invest in outside enterprises, or that at death he leaves even a bare subsistence to his family. The prophecy of the late lamented Dr. Lyster, made in one of his public addresses many years ago, to the effect that in the near future the income of $50,000 per annum would not be considered an uncommon one for the active physician, does not seem to have been fulfilled. We read with sorrow, not unmingled with surprise and shame, that the widow of the great Charcot is reduced to letting apartments for a living. And, unfortunately, not a few similar instances might be quoted.

The ordinary physician learns, early in his professional career, that he never can grow rich from the practice of medicine and surgery. Perhaps this is one of the chief reasons why he is tempted into investing his savings in any venture that promises "big returns."

Even with the full realization of the utter ignorance displayed by the medical man in the business world, it is indeed surprising to witness how easily he parts with his hard-earned savings in this or that "get-rich-quick" scheme. It is also true that he does not become "educated" into letting these visionary affairs alone, but is ever ready to bite ravenously at the "big returns" bait. He is constantly meeting patients and friends who, in most part, are sincere in wishing to see the good doctor grow suddenly rich, when they advise him of this or that "good thing." How many of you have escaped investing, or rather I should say burying, your money in gold, silver, or copper mines that were to make you rich men, or in some patent of one kind or another that promised even greater and surer results, or in some small manufactur-

ing concern that was to grow and grow until your dividends amounted yearly to more than your original investment?

The physician often is induced to become financially interested in some business enterprise by being offered a directorship or some other office in the company. He is naturally pleased and flattered, and plunges into the affair with more money, energy, and time than he otherwise would do. He finds, sooner or later, that he cannot serve two masters—his profession and the business—without injuring each, so he necessarily relaxes an active interest in the financial issue, and allows others, often with no vital interests involved, to run the business. The result in such cases is the natural one of failure and costly experience for the doctor. Sometimes he loses far more than the original investment, because as a stockholder in a manufacturing concern he is held liable for any additional losses which may occur.

Nowadays, the words assessable and non-assessable, terms used in regard to stocks, really mean "six of one and half-dozen of the other." Non-assessable stocks are advertised as being perfectly safe from assessment, and so they are. One is induced to buy some shares of non-assessable stock, say in a gold mine or oil company. After a time the directors of the concern write the "victim," stating that he must buy 25 per cent or 50 per cent more *treasury* stock at a certain price, which often is higher than the market value, or he will lose all the money he has put into the "investment," as there is no money in the treasury to carry on the work. So in this way "promoters" gouge more money out of the unsuspecting innocents than they would dare levy in assessments.

The physician who is fortunate enough to be laying up a yearly balance on the right side of the ledger should invest this surplus so that it is, as nearly as possible, absolutely safe and certain. He must not expect to draw an annual interest of more than four to six per cent without a risk. It is a well-proved fact in finance that the higher the rate of interest promised on an investment, the greater is the risk, yet medical men are usually looking for investments that promise 10, 20, 50, 100, and even 1000 per cent interest, apparently quite ignoring the almost certainty of throwing their money away, for they have barely one chance in fifty of winning out.

Not long ago a "promoter" called at a local bank and unfolded to the cashier a scheme of growing suddenly rich by investing in a company which he was organizing to exploit a patent. The banker told the man that the scheme was too visionary to attract business men, and asked him how he expected to raise

the money. He replied by handing the cashier a sheet of paper on which was written the names of from twenty-five to thirty physicians and a like number of school-teachers, remarking that doctors and school-teachers were easily persuaded to invest their money in any enterprise that promised rich results, and they never bothered about the risk.

Only a few days ago a really good friend of mine begged me to invest in a $5,000,000 company, which proposed to operate a lumber plant in the mahogany forests of Mexico. He had figures that proved, on paper, that by investing $500 or $1000 in the stock of the company, one would derive an income of from $500 to $2000 yearly for the rest of his life. The president of this great company, happening to be in Detroit, was brought to my office. He remarked he was very fond of the society of medical men, and in visiting a city he made it a point to call on one or two of its leading doctors. For obvious reasons I did not feel flattered, and could not help thinking that my name must be on his list of "gullible people." He shortly announced he would be pleased to have me buy some stock for half the price offered the general public, for he would value my services on the advisory board of directors, as the undertaking was such a huge affair it was thought best to have such a board in connection with the regular directors. Although overcome by the kind offers of wealth and honor, I felt myself of too retiring a nature to put myself under such great obligations to total strangers, not to mention my ignorance of timber lands in general and mahogany logs in particular, and so I politely declined going into the business.

It is almost unnecessary for me to say that life insurance is an investment to be regarded as a duty, especially by the married doctor with a family; and an endowment policy in some high-class company is always a welcome provision, maturing usually at a time of life when the beneficiary can derive much comfort from it.

Before the physician seeks to expend his surplus means in any outside business he should fully realize that he can seldom make a safer or more satisfactory investment than by dealing generously with his own professional needs. Economy should not be encouraged here. His office and its appointments should be of the very best that his income can afford. The latest medical books and instruments, including the leading professional journals, should be real necessaries for him. This is the casting of bread upon the waters that the wise king advised.

I am fully aware that there are occasionally medical men who

have made notable triumphs in the financial world, and whose judgment and investments in general can be depended upon as excellent; but you all will admit that exceptions only prove the rule. I, myself, am not one of those exceptional doctors, and I surely cannot pretend to this sort of wisdom, or attempt to set up to advise you how to spend your savings in launching out into "enterprises of great pith and moment." Consult your banker, who will probably suggest your buying high-class bonds as the safest and best investment.

THE American Medical Association offers annually a gold medal of the value of one hundred dollars for the best essay on any subject relating to medicine or surgery. To the recipient of this prize will be given the option of the gold medal or a bronze replica of the medal, and the balance of the appropriation (about $90) in money, or the entire amount ($100) in money. Inasmuch as the association annually sets apart the sum of five hundred dollars for original research, this prize is offered to stimulate the production of a superior practical paper based upon either experimental studies or clinical investigation, or both. The committee will give preference to papers having the greatest brevity consistent with thorough consideration of the subject, and recommends that they do not exceed five thousand words. The committee, while not restricting the choice of subject, recommends as an important subject for consideration "The Therapeutic Value of the Digestive Ferments." Competing essays must be typewritten, and bear no mark revealing their authorship; but instead of the name of the author there must appear on each essay a motto, and accompanying each essay a sealed envelope containing the name of the author and bearing on its outer surface the motto of identification. No envelope will be opened by the committee until a decision has been reached as to the most deserving essay. The other essays will be returned to their respective authors. The committee reserves the right to reject all essays if none are found worthy of the association medal. Competing essays must be in the hands of the chairman of the committee not later than April 1, 1904. The members of the committee are Lewis S. McMurty, of Louisville, Ky., chairman; Burnside Foster, of St. Paul, Minn.; M. H. Fussell, of Philadelphia, Pa.

THE MEDICAL AGE.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE NATURE OF SLEEP.

The adoption of the neurone theory into accepted physiological doctrine has led to many modifications in existing conceptions. It has furnished a more complete histological basis for legitimate induction, and while much of the reasoning dependent upon its conception may not have greater validity than that which proceeds from a working hypothesis, its successful fulfilment of prediction as this is applied to the explanation of phenomena becomes more and more presumptive of its truth.

The phenomenon of sleep is one which is still circumscribed by more or less incomplete theorizing, a fact which is attested by an admirable article which recently appeared in the *Popular Science Monthly* enumerating the various theories which still hold by virtue of partial explanation.

Sleep is regarded as an unconscious state, and while this may be true of man and the higher animals, it is not so universally. Broadly speaking, cosmic processes such as the alternation of day and night have imposed certain rhythmic conditions on all phenomena, but the subjective equivalent of this process is not necessarily that of sleeping and waking or that of consciousness and unconsciousness. In plant and lower forms of animal life, the physiological equivalents may be of a different kind.

Two opposite theories of the nature of sleep are those of Pflüger and Preyer. Sleep follows general or local fatigue, therefore it is due to exhaustion of the fuel substance or to the accumulation of waste. The chemical changes dependent upon fatigue give us the chemical theory of Pflüger or the accumulation theory of Preyer. For the exhaustion theory there is probably not much real evidence. If this is true, we ought to be sleepy after elimina-

tion by means of exercise or excretory effort, and wide-awake after idleness. Nor is the alternative theory entirely free from blemish. If sleep be due to the accumulation of toxic products, as such substances as lactic acid, we should be most wide-awake when the blood is most normally alkaline, and this would be during digestion. Even the phenomena of artificial sleep, anesthesia and hypnosis, seem to be dependent upon explanations other than toxic ones.

The phenomena attending the state of sleepfulness point rather to physical changes in the neurons or dendrites. First sleep is not attained abruptly, it is gradually acquired. Hearing is the last sense to be obtunded and the first to be restored. Sleep is evidently dependent upon the withdrawal of sensory impulses. There was a boy who had one eye and suffered from cutaneous anesthesia; he could be made to sleep by simply closing the lid of the single eye. Certain vascular changes seem to be assured. The dryness of the eyes may be due to diminished circulation in the tear glands. The hyperemia of the skin indicates dilatation of the cutaneous vessels, and anemia of the brain is assumed to be proved beyond question. These facts form the basis of Howell's theory of exhaustion of vasomotor centers. Cerebral anemia though there certainly be, this is not however proved to be more than a concomitant of the sleeping state.

Of the recent histological theories bearing on the nature of sleep, two call for recognition—one that of Duval, and the other that of Lugaro. In Duval's opinion consciousness is supposed to be dependent on the contact of cell-processes in the brain from neurone to neurone. Sensory impulses if they are to change consciousness must have a path for their passage. A single synapse is impassable, and the message from a sense organ is lost to conscious life. Duval's view of the unconscious state therefore includes a conception of the retracting of the processes of the cortical cells. Lugaro's opinion is almost the exact opposite of this. In sleep Lugaro supposes the cells to have made new contacts. This might at first be supposed to imply richer consciousness, but actually this might only be indiscriminate or confused combination, and these fantastic and meaningless associations might be the basis of the stuff that dreams are made of, and so of ultimate unconsciousness. It may be that all these theories contribute their quota of truth, and that while Pflüger, Preyer, and Howell give a representation of the physiological state, the true picture of the slumbering brain includes the extension of some avenues and the diminution of others; that while special sensation avenues are

closed, general neurone to neurone connection may become more diffuse and heterogeneous. Like many another fundamental problem, that of sleep may still furnish material for the research of the laboratory experimentalist, as it may supply exercise for the ingenuity of the scientific philosopher.

THE APPOINTMENT OF INTERNES.

Theoretically, every graduate in medicine who expects to practice should supplement his didactic course by a year's experience in a hospital. Unfortunately, there is room for only a quarter of these graduates, or perhaps less, and the remainder must acquire practical experience in other ways. Most hospitals hold examinations of applicants for positions as interne. In many instances the applicants, year after year, go to these examinations with the feeling that their appointment or failure rests solely upon the result of the examination. In other cases there exists the feeling, equally deep rooted, that the examination is a farce and that the appointment rests upon favoritism. Possibly such a charge is often unmerited, but when, after several years, one finds that the relatives and personal friends of the hospital staff are almost constantly represented on the house staff, when the college examinations and those of the hospital fail to agree in standards of excellence, when successive classes of students quite accurately prophecy who of their number will receive appointments as interne, without special reference to scholarship, there is obviously some ground for these imputations.

A private hospital certainly has the right to establish its own rules, and there is much truth in the contention that a formal examination does not necessarily result in the selection of the most practically useful man, for any position. But in the case of any public institution there is a principle of abstract justice far more important than the immediate question of obtaining, in one particular instance, the best man for the place. The experience and judgment of the most enlightened thinkers and executives have firmly established the principle of appointment after an impartial examination as the best solution of the problem attainable. If a hospital board is not willing to abide by the standard test for the civil service, it should honestly declare its intention to be guided by other considerations, and should then fight out the issue with public sentiment.

The importance of this matter is not limited to the rights of a comparatively few young medical men. Granting that Dr. A.

gets the coveted position that Dr. B. deserves, because the former's father, Dr. A. Senior, is a member of the hospital staff, or because the staff likes Dr. A. better than Dr. B., in the long run the work of the hospital will, nevertheless, be fairly well accomplished, and both Dr. A. and Dr. B. will succeed or fail according to the general laws of human life. No, the important point is that representative medical men are guilty of precisely the same kind of corruption that may be condoned in an ignorant, foreign-born politician, with no ideals or no standing which lend influence to his moral acts. The evil to which we have alluded is by no means universal or even general, but it cannot be dismissed as imaginary. When a group of several hundred medical students and graduates are taught by the example of men whom they must regard as prominent and honored in the medical profession to regard dishonesty as a normal condition, the high ideals of the profession are being degraded and the influence of the profession, whether for its own good or the welfare of humanity, is being diminished.

EDITORIAL NOTES.

Experiments to Determine the Effects of Tobacco.

Dr. Wiley, of Washington, who recently completed his investigations into adulterated foods, will soon start another series of experiments to determine exactly how injurious tobacco is to those addicted to its use. Dr. Wiley will select men who are habitual users of the weed, and have them examined physically from time to time while continuing the use of tobacco. He will then have them suddenly break off the habit. After the effects of the prolonged use of tobacco have worn off, he proposes that his subjects shall recommence the use of tobacco, beginning gradually and working up to the amount customarily used. It is doubtful whether any really scientific data can be obtained in this way, for unless Dr. Wiley's subjects are men of exceptional honor they will use tobacco surreptitiously and thus spoil his efforts.

Crusade Against Tuberculosis in Buenos Ayres.

The extremes to which health authorities may sometimes resort in their crusades against tuberculosis is shown in the stringent measures which have recently been inaugurated in Buenos Ayres. A penalty of approximately $200 is enforced for every

householder who neglects to comply with the regulation that every house in which a tuberculous person has passed even a single day is to be regarded as infected and disinfection required. No tuberculous person is to be allowed to serve as waiter, cook, butcher, or deal in any way with articles of food. Other measures equally as stringent are also in force. It seems strange that medical health officers—who of all persons are supposed to know more of such matters—should consider it necessary to practically make lepers of the poor unfortunate victims of tuberculosis. Life for even the wealthy consumptive is hard, but to be bound down by such regulations as these will make the struggle for existence among the tuberculous poor doubly hard.

Experience of Drowning.

The popular belief that death by drowning is the most pleasant one that an individual can experience has at last been scientifically refuted. A very interesting paper, recording his experiences while drowning, has recently been published in the *Edinburgh Medical Journal* by Dr. Lawson. This writer says that at first the most striking thing was intense, intolerable pain in the chest: "It seemed as if one were in a vice, which was gradually screwed up tight until it felt as if the sternum and spinal column would break." Following this awful pain there came a sensation as if one were in a pleasant dream. Dr. Lawson says that before consciousness returned his sensations were positively pleasant, but what remains most vividly in his imagination was the fearful agony of his attempts inspired during the first stage of his experience.

Medical Courses for the Laity.

Within the past two months the St. Petersburg Red Cross Society has commenced a two years' course of instruction for laymen in the principles of hygiene, disinfection, emergency operations, surgery, and medicine. Practical demonstrations are given at the municipal hospitals. The society wishes to enlighten the laity in regard to the onset and care of disease, and upon the completion of the course diplomas will be awarded. It is hard to concur with the inaugurators of this scheme that any particular benefit will be derived from it. On the contrary, a great deal of harm may result, owing to the fact that a little knowledge is sometimes a dangerous thing.

ITEMS AND NOTES.

THE property of the Memorial Hospital for Women and Children, Brooklyn, was recently sold at public auction for $96,500.

THE Prussian authorities have cautioned the police against allowing any public exhibitions of magnetizing, suggesting, or hypnotism.

ALL the provinces of Italy now have quinine bisulphate for sale everywhere, standardized by the government and sold at the postoffice in places without a drug store.

IN the bill indorsed by the Alabama State Pharmaceutical Association there are provisions prohibiting druggists from selling cocaine except on physicians' prescriptions.

RUSH MEDICAL COLLEGE, now the medical department of Chicago University, is soon to benefit by the expenditure of a large portion of $10,000,000 in new hospitals and laboratories.

THE University of Chicago has purchased the entire south frontage of the Midway Plaisance, between Cottage Grove and Madison Avenues, at a cost of $1,000,000 for the land, and $45,000 for the buildings.

THE statistics of the Imperial Health Office show that the total spent on alcoholic liquors in 1902 throughout the German empire was about $625,000,000, an average per head for persons over fifteen years of age of $35.

A MAN was arrested in Paris for smoking in an omnibus. His defense was that he considered he had the right to smoke for hygienic purposes, and in order to kill the microbes which existed in such formidable numbers in all omnibuses.

AN ambulance service for the transport to hospital of children suffering from infectious diseases has been established in Berlin. There are to be stations in various parts of the city. After the conveyance of a patient the ambulance van will be disinfected.

THE International School of Hygiene has selected one man from each country in the world as a representative. Dr. J. K. Shell, of Philadelphia, is invited to represent the United States at the next annual conference at Guttenburg, Germany, in 1904.

A NATIONAL anti-tuberculosis association was founded in Denmark two years ago, and has now 30,000 members. A model public sanatorium has been just opened at Silkeborg, the first in the country. It has accommodations for 122 patients, with 112 rooms facing the south. Each patient has a minimum of 900 cubic feet of space.

THE second session of the Navy Medical School was opened October 1. This year's class will contain 260 students. This list of students is augmented by those who have been found qualified by the examiners during September, and pending the receipt of commissions these approved candidates of the corps will be permitted to enter the school.

NEVER before in the history of the Alps have death and disaster been so common on the mountains as during the present season. Over 300 accidents have occurred, resulting in the loss of 150 lives. Over half of this season's accidents have happened to Germans and Austrians, who, partly from bravado and partly from pecuniary reasons, climb without guides.

THE city of Dresden has opened the first governmental institution for the cure of drunkenness on the continent. Patients must be examined as to their sanity and be diagnosed as curable, and must voluntarily submit to a regimen of healthful living, such as farm work. They will have good moral surroundings, and must pay 45 cents a day. Patients may stop three years in the institution.

THE *Canadian Journal of Medicine and Surgery* compares the situation of the medical profession in France to that of the profession in Ontario. The comparison is significant. In the rural districts of France there are about 3 doctors per 10,000 of population. In the larger cities there are 7.4 per 10,000, and in Paris 10.65 per 10,000. Throughout Ontario there are 11.4 doctors per 10,000, while in the city of Toronto the physicians number 20 to the 10,000. Roughly speaking, therefore, there is in Ontario double the number of physicians per head of population that there is in professionally overcrowded France.

IT is announced from Paris, says the *Journal of the American Medical Association,* that the chimpanzee successfully inoculated with syphilis this summer now presents the symptoms of the secondary stage. When Metchnikoff and Roux exhibited the animal at the Académie de Médecine, July 28, the primary chancre was recognized as specific by Fournier and others, and

the eruptions, swollen glands, and enlargement of the spleen are now likewise classified as specific by experts, as Metchnikoff proclaimed at one of the meetings of the International Congress of Hygiene and Demography, which has just closed its sessions at Brussels. Attempts to inoculate other monkeys from this animal, selecting those a degree further removed from man, have proved negative. It seems to be established by this research that the anthropoid apes alone are susceptible to syphilis.

It is stated, says *American Medicine,* that the failure of the cod-liver oil crop for four years has caused the Norwegian government so much concern that official bulletins have been issued about it. The failure is not altogether in the supply of cod, for about the same number are taken from the sea each year, but the cod that are caught lack nutriment. Most of them are half-starved, and do not weigh one-third as much as they should. Some of them are so thin that the livers (from which the oil is taken) are barely distinguishable. The coldness of the sea has killed the smaller fish on which the cod subsist. Hundreds of cod caught with lines are found to have been bitten by hungry seals. A bulletin recently issued by the Norwegian government says: "The condition of codfish is worse than ever. They have no livers to speak of. It is now requiring 40,000 fish to make a barrel of oil. This is without parallel in the history of our fisheries." So far as the trade is concerned, wholesalers are compelled to replenish their stock on almost any terms demanded.

Major Penton, the medical officer of the Soudan, has made a report in which he says that Ismailia has been practically freed from mosquitoes, while at one time the air was literally swarming with them. It is now possible to sleep in comfort without the use of nets, which, the Major says, he had done for the purpose of experiment, and during the nights in question he sustained but a few bites. This result has been accomplished largely by the abolition of two large marshes in the northeastern part of the city, which have been filled in with sand, and the work of draining a third is about to be commenced. It is a very remarkable and significant fact that the present season is freer from fever than any one of which there is any record. During the period from January to July, in one hospital there were only three cases of malaria, while during the same time of the previous year the total number was fifty-two. Major Penton says he hopes that malarial fever will disappear entirely when the present work of treating the marsh lands will have been completed.—*American Medicine.*

NEW PUBLICATIONS.

PHYSICAL DIAGNOSIS.

The speedy appearance of a second edition of Cabot's Physical Diagnosis is a genuine tribute to the excellence of the manual. The author corrects many mythological notions pervading the smaller and now antiquated manuals, such as that the aortic sound is normally louder than the pulmonic, that aortic regurgitant murmurs are best heard in the second right interspace, and several other delusions. The new edition comprises a useful chapter in radioscopy of the chest. The work is one which may be recommended for the use of students and practitioners, without reserve.

Physical Diagnosis of Diseases of the Chest. By Richard C. Cabot, M.D. Second Revised Edition; 147 Illustrations. New York: Wm. Wood & Co.

OBSTETRICS.

This manual is a concise text-book of the principles of obstetrics. The objection to many manuals being their voluminous size, the present one has been arranged in a manner calculated to secure the compactness compatible with clearness and completeness. The text recites in a plain, unvarnished manner the essential facts of aseptic midwifery, and endeavors to teach how these can be practiced under the restrictions of the private home and with the limited outfit of the general practitioner. The book is admirably presented to the reader, being profusely illustrated and printed on excellent paper.

The Principles of Obstetrics. A Practical Manual for the Student and General Practitioner. By Stanley Perkins Warren, M.D. New York: William Wood & Co.

CONSUMPTION.

This is a most excellent résumé of the main facts of tuberculosis as they should be presented for the understanding of the lay public. It would be an admirable little work for boards of health to circulate, as it comprises all essential knowledge and is thoroughly modern in tone.

Consumption, a Curable and Preventable Disease. What a Layman Should Know About It. By Lawrence F. Flick, M.D. Philadelphia: David McKay.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Radical Cure of Inguinal Hernia.

The following steps are considered by W. S. Halsted (*Johns Hopkins Hospital Bulletin,* August, 1903) in the operation for the radical cure of inguinal hernia:

1. The aponeurosis of the external oblique muscle is divided and the two flaps reflected, as in the Bassini-Halsted operation.

2. The cremaster muscle and fascia are split, not directly over the center of the cord, but a little above it.

3. The internal oblique muscle is made as free as possible. A little artifaction is here often necessary. If the muscle cannot be drawn, without tension, well down to Poupart's ligament, it helps to make a relaxation cut or two in the anterior sheath of the rectus under the aponeurosis of the external oblique. This sheath being in the aponeurosis of the internal oblique, one can readily comprehend that incisions into it, if properly made, might be of service. It is well, however, to postpone making such incisions until the sewing of the internal oblique muscle to Poupart's ligament is begun, for then the amount of tension can be nicely gauged, and the number, length, and precise position of the relaxation cuts determined.

4. When the veins are large, and this is usually the case, they should be excised with great care to avoid even the slightest extravasation of blood into the tissues about the smaller veins and about the vas deferens, which they accompany. And the vas deferens, as first emphasized by Bloodgood, should not be raised from its bed or handled, or even touched, lest thrombosis of its vein occur. The veins should be ligated as high up in the abdomen as possible, being pulled down quite firmly just before the ligature (in needle with the blunt end first) is passed between them. As a precaution against slipping, apply two ligatures of fine silk, both for the abdominal stump and for the testicle stump of the veins. The farther from the testicle the veins are divided the better, provided of course that their stump is external to the external abdominal ring.

5. Ligation of the sac by transfixion or by purse-string suture at the highest possible point. Both ends of this suture, after

tying, are threaded on long, curved needles, then carried far out under the internal oblique muscle from behind forward, and passing through this muscle about five millimeters apart are tied.

6. The lower flap of the cremaster and its fascia is drawn up under the mobilized internal oblique and held in this position by very fine silk stitches, which, having engaged firmly a few bundles of the cremaster, perforate the internal oblique, preferably where it is becoming aponeurotic, and are tied on the external surface of the latter.

7. The internal oblique, mobilized and possibly further released by incising the anterior sheath of the rectus, is stitched (the conjoined tendon also) to Poupart's ligament in the Bassini-Halsted manner. Catgut is usually employed for this suture. The aponeurosis of the external oblique muscle is overlapped. This is known as Andrew's method, although devised independently. The skin is closed with a buried continuous silver suture, and the incision covered with five or six layers of silver foil. It is unnecessary to dress or examine a wound closed in this manner for two weeks, when the wire may be withdrawn. Patients are kept in bed from eighteen to twenty-one days. Seven excellent plates which accompany the article very largely explain the operation.

The Diagnosis of Carcinoma of the Stomach.

In seeking for some means of early diagnosis of cancer of the stomach, H. Salomon (*British Medical Journal,* Sept. 12, 1903) found that not much could be gained by estimating the number of microörganisms in the stomach, nor did he have any success with serum diagnosis. He attempted to obtain a serum which would act specifically with the serum of cancer patients, but without success. The supposition that wherever there is an ulcerating surface a certain amount of serum will be exuded, led him to see if the amount of albumen gained from the stomach would lead to better results. He proceeded as follows: The patient received milk and like fluid diet in the morning, and at about two o'clock a fluid meal, which was free from albumen, such as bouillon, tea, coffee, or wine. The stomach was washed out at 9 P.M. with a large quantity of water, and was kept without any intake over night. In the morning the stomach was washed out several times with 400 cubic centimeters of physiological saline fluid. The returned fluid was tested for albumen by Esbach's test, and the quantity of nitrogen was estimated by Kjeldahl's method. In the majority of cases of nervous dyspepsia, chronic catarrh of the

stomach, gastroptosis, etc., there was either no albumen at all, or at most a slight clouding of the fluid. The nitrogen varied between 0 milligrammes and 16 milligrammes in 100 cubic centimeters of fluid. The same results were obtained in cases of chronic ulceration of the stomach, but for obvious reasons he did not test cases of painful gastric ulcer. In all cases of cancer of the stomach which he examined the amount of albumen varied between one-sixteenth and one-half per cent. The nitrogen value was corresponding, and lay between 10 and 70 milligrammes per 100 cubic centimeters of fluid. He states that according to his present experience, when there is a doubt as to the nature of a chronic disease of the stomach, carcinoma is probable if the washing-out fluid shows a flocculent precipitate with Esbach, or when the nitrogen value exceeds 20 milligrammes per 100 cubic centimeters of fluid. It is, however, he says, probable that an intense catarrh of the stomach may give the same results as carcinoma, but he has not yet come across such a case. He gives some details of cases in which his method was capable of correcting a wrong diagnosis.

Congenital Dislocation of the Hip.

F. F. Burghard (*British Medical Journal,* Aug. 29, 1903), draws the following conclusions:

That all cases should be checked by radiography, and that no "cure" should be spoken of that is not a true anatomical cure.

That all cases of congenital dislocation under fourteen years of age should be submitted to treatment. In the great majority improvement will result, while in some a true anatomical cure is brought about.

That in all these cases Lorenz's manipulations should be tried in the first instance. Even should they fail to effect reduction they facilitate any subsequent procedures.

That the prospect of a cure by Lorenz's bloodless method is in direct proportion to the youth of the child, and that after the age of four years there is little hope of a true cure by its means.

That in any case the chances of a true cure by the "bloodless method" are not very great.

That an open operation should be done whenever a radiograph shows that the "bloodless method" has failed to reduce the dislocation, except perhaps in the case of a very young child under three years, in whom the manipulation may be repeated.

That with the open operation no fear need be entertained of shock, bleeding, or sepsis.

That under no circumstances should the joint surfaces be remodeled.

That an open operation is more calculated to result in a cure, as it enables the surgeon to ascertain beyond a doubt when the head of the bone is really in the acetabulum.

That the open operation is especially suited for cases over four years of age, and for those of bilateral dislocation.

That after the operation the limb should be put up in the position of maximum stability; in the majority of cases this will be similar to Lorenz's position. The limb should be put up in plaster of Paris immediately, and the casing should take in the flexed knee; this is essential in order to insure stability of the head of the bone.

That all tense structures should be stretched or tenotomized as a preliminary measure a week or so previously to the open operation. The after-treatment is practically identical with that of the Lorenz method.

The Toilet of the Peritoneum in Tuberculous Peritonitis.

In the absence of ascitic fluid in the peritoneal cavity the diseased tissues may, according to A. J. Ochsner (*Annals of Gynecology and Pediatry*, September, 1903) be removed with safety if the section be made entirely through healthy tissues. In the presence of ascitic fluid the latter should be evacuated and the abdominal cavity drained. In making the intra-abdominal manipulations and examination great care should be exercised not to cause any abrasions. Adhesions should not be disturbed. The less the tissues are manipulated, the better will be the results. Manipulation of the infected pelvic organs—uterus, ovaries, Fallopian tubes—is less harmful than manipulations of the infected intestines.

MEDICINE.

The Boundary Line Between Chronic Alcoholism and Alcoholic Insanity.

A. W. Dunning (*St. Paul Medical Journal*, September, 1903) says the early recognition of insanity of this type is very important, but often exceedingly difficult.

It commonly rests with the general practitioner to make this

diagnosis either in the home or as an examiner in lunacy in the probate court. The true nature of the case is frequently overlooked because of a lack of appreciation on the part of the physician of the significance of the diagnostic points suggested above.

As a profession we should make more careful study of chronic alcoholism, and be able to distinguish with certainty between the sane and the insane alcoholic.

The state makes no provision for the care of the inebriate, and partly because of this fact there is a tendency to dismiss all alcoholic cases as ineligible to state care. This should be corrected, and by a firm and united stand upon the part of the profession the state should be induced to provide for the prolonged restraint and control of that class of periodic insanity known as dipsomania, as well as for all other types of alcoholic insanity.

Knowledge carries conviction, and when once we are convinced that a man is insane as the result of the excessive use of alcohol we should stand by our conviction regardless of the attempts of a shrewd lawyer to influence us against our conviction, and in spite of the popular idea that common drunkenness accounts for all the erratic doings of all the victims of the drink habit.

Diseases of the Respiratory Tract.

W. W. Potter (*Buffalo Medical Journal,* October, 1903) says that a person suffering with obstructive intra-nasal disease—chronic nasopharyngeal catarrh—is not laboring under a mere inconvenience, but has a malady that involves very serious danger, a danger that increases as years advance, and which, uncured, is a constant menace to the integrity of the lower respiratory tract.

The neuroses dependent upon nasal obstruction are often as serious in their symptomatology as they are distressing to the patient. They affect not only the respiratory tract, but the heart and other organs, often masking the real disease to an extent that may embarrass the examiner in making a differential diagnosis.

Chronic catarrhal bronchitis is a disease of potential importance, slow in its progress, often depending upon nasal obstruction as a primary factor or cause, and is of most serious import in the aged.

Asthma is, for the most part, a reflex manifestation of nasopharyngeal disease, generally obstructive in character; it is seldom idiopathic, but its paroxysms are similar whether it be

true or false, whether it be reflex or bronchial; and its chief importance is as a symptom of disease located elsewhere, spasm of the bronchial tubes being a distressing expression of the lesion.

Syphilis as a Cause of Chorea.

L. H. Mettler *(American Journal of the Medical Sciences,* September, 1903) formulates the following conclusions: Syphilis in rare instances is the cause of chorea, and should always be thought of as a possibility in the examination of every case. Chorea may be the result of acquired or hereditary syphilis. Most of the cases of syphilitic chorea are unilateral, and belong to the prehemiplegic or posthemiplegic type of the disease; they may or may not be associated with other signs of an irritative lesion, are not infrequently developed in hereditary syphilitics, and are to be attributed probably to a functional disturbance of an irritative sore in the cortical and ganglionic motor cells. The existence and recognition of these two forms of syphilitic chorea, the focal and the generalized, support the inference that all forms of chorea are but the expression of one or more of a multiplicity of possible factors which may disturb the functional activity of the upper motor neurons, these factors being all the way from a gross lesion down to a molecular or chemical change not demonstrable with our present means of investigation. This conclusion leads to a further conclusion that chorea is not a disease, but a mere symptom. Syphilis when determined as the cause of a case of chorea should lead to the prompt and thorough treatment of the case as one of syphilis and not chorea.

The Question of the Transmissibility of Typhoid Bacilli by Means of Butter.

Bruck (*Deutsche med. Wochenschrift*, No. 26, 1903) made the following experiments: Commercial milk was infected with typhoid bacilli, the cream separated and then made into butter, and in every instance the results showed that the typhoid bacilli were separated with the cream and then the butter. In order to simulate natural conditions in the manufacture of butter the cans used were rinsed (*a*) with a pure culture of typhoid bacilli, (*b*) with a natural typhoid stool. The latter experiment was modified by taking 500 cubic centimeters of water, mixing it with one cubic centimeter of feces and centrifugalizing, and the supernatant fluid was used to wash out the can, 500 cubic centimeters of cream

being used to make the butter. In another experiment a piece of linen three centimeters long contaminated with typhoid stool was washed with 500 cubic centimeters of water and the washings used to rinse the can. In all these experiments the results were the same, the butter being found infected with typhoid. The virulence of the typhoid bacillus was found to be retained twenty-seven days, and in the first few days there was an apparent multiplication. Many typhoid cases in which the course of the infection cannot be traced may be due to infected butter.

The Adams-Stokes Syndrome.

Peter Bassoe (*New York Medical Journal,* Sept. 5, 1903) says the Adams-Stokes symptom-complex is not a clinical entity. It may supervene in various diseases involving the heart, vagus nerves, or medulla oblongata.

It is particularly likely to set in when the upper part of the ventricular septum is diseased.

Arteriosclerosis is not essential for its production.

Its occurrence in a well studied case of localized lesion of the intramedullary portion of the accessorious nerve supports the hypothesis that the inhibitory fibers of the heart are derived from this nerve.

A lesion of the ventricular septum is capable of producing bilateral degeneration of the extramedullary cardiac fibers of the vagus nerves.

The existence of bradycardia in a case with bilateral vagus degeneration proves the muscular origin of bradycardia in such a case, as the inhibitory influence of the vagi then must be absent.

The bradycardia is the fundamental feature of the Adams-Stokes syndrome. The nervous symptoms vary largely according to the susceptibility of the nervous centers to the circulatory disturbance induced by the bradycardia.

Some Causes of Cough and Rhinitis.

Rosenfeld (*Berliner klin. Wochenschrift,* No. 9, 1903) remarked that the pollen of the Graminiferæ has been demonstrated to be the etiological factor of hay-fever; he could demonstrate cases of cough and rhinitis due to the bifurcated hairs of the leaves of the genus Quercus, causing an intense irritation of the conjunctiva, nasopharynx, and larynx, sometimes accompanied by a rise of temperature. He also cites a case of a woman

who on returning from a summer resort suffered from rhinitis and cough, which was proved to be due to the dust from the feathers of her parrot. He believes that there are many similar causes of cough and rhinitis to be found which will tend to elucidate the many peculiar cases occurring of this distressing train of symptoms.

A Note on Four Cases of Blackwater Fever.

J. C. Taylor (*Lancet,* Sept. 19, 1903) reports four cases of this fever which came under his notice. He draws attention to the following points:

All these cases developed on board ship homeward bound from the west coast of Africa, presumably away from any direct or recent infection. Only one of the cases had suffered from a previous attack. In all cases there had been a slight chill (malarial), for which one gramme of quinine had been taken, and within a few hours the symptoms developed. The last point is the satisfactory use of boric acid, one gramme of which in hot water was given every two or three hours, according to the severity of the attack. If there is vomiting it could be given by rectal or subcutaneous injection.

The Association of a Rise in Systolic Blood-pressure with the Onset of Perforative Peritonitis in Typhoid Fever.

J. B. Briggs (*Boston Medical and Surgical Journal,* Sept. 24, 1903) concludes from his study of the subject: (1) That patients with general or rapidly spreading peritonitis have constantly, at least in the early period, abnormally high blood-pressure. (2) That in perforative peritonitis sharp rise in blood-pressure may precede the onset of other symptoms. (3) That in doubtful cases in which perforative peritonitis is suspected, and the general, previous blood-pressure level is known, the course of the blood-pressure after the onset of grave symptoms should receive consideration in determining the propriety of an operation.

The Significance of Sugar in Urine.

Hubner (*Zeitschrift für diat. und physical. Therapie,* Bd. vii, 1903) calls attention in a lengthy article to the importance of the differential diagnosis in cases showing an elimination of sugar in

the urine, and enumerates the errors that may occur by the elimination of grape-sugar due to alcohol and consumption of fruit, the occurrence of milk-sugar in pregnancy and during lactation, also at the time of the weaning of the child. Sugar is also eliminated in certain fevers and in the condition which has lately been described as pentosuria. It is of practical importance not to be misled by Trommer's test and establish on it alone the diagnosis of diabetes mellitus.

Elimination of Bacteria from the Body.

Noetzel (*Wiener klin. Wochenschrift,* No. 37, 1903) experimented with rabbits, of which nineteen of the twenty-eight animals taken showed no evidence in the urine of bacteria which had been inoculated ten or fifteen minutes before. At no time during the course of two hours was there a decided elimination of bacteria by the kidneys, and the author comes to the conclusion that there is no elimination of bacteria by the normal excretory glands. His examination of infected bile leads him to question whether the liver cells excrete the bacteria together with the bile, or whether the infection takes place by way of the common duct from the duodenum.

THERAPEUTICS.

Treatment of Pneumonia.

In the management of cases of pneumonia the indications, according to J. H. Musser (*Canada Lancet,* July, 1903), are classified into five major divisions:

1. Indications derived directly from the diagnosis.
2. Those based upon the conception of the morbid process.
3. Those based upon symptoms.
4. Results of examination of organs and structures of the body not related to the disease.
5. Facts derived from the social, family, and previous medical history.

Following this scheme in the treatment of pneumonia, some of the points made are: (1) Antipneumococcic serum is not recommended. (2) Dry-cups are used early and from one to three times; a calomel purge is given; water is used freely both internally and externally; salt solution is given by the rectum and subcutaneously; and alcohol, in the form of champagne, is exhibited

if necessary. (3) Pain is harmful, and if not relieved by cupping and the use of ice, morphine hypodermically should be employed. (4) If serous meningitis ensues, spinal puncture is indicated. If the kidneys are affected they need even more attention than does the lung. Dyspnea with right-sided dilatation of the heart, either before or after the crisis, calls for venesection or leeching. (5) The habits of the patient furnish various indications. Finally, in probably 60 per cent of all cases of pneumonia only careful nursing is needed; in 40 per cent there is a great deal to be done by the physician.

The Local Injection of Potassium Iodide in Syphilitic Ulceration.

H. Duclaux (*British Medical Journal,* Sept. 12, 1903) adds a further case of syphilitic ulceration of the leg with osteoperiostitis of the tibia cured by the local injection of potassium iodide to those already published by Labadie-Lagrave and Rollin in the *Bulletin Médical* of January 24, 1903. A child of twelve had undoubted syphilitic ulceration of the leg, and had undergone previous treatments for five months with little change. Duclaux at the suggestion of Kirmisson, under whose care the child was, administered eighteen injections, and at the end of a month cicatrization was complete. Each injection consisted of two cubic centimeters of a three-per-cent solution of potassium iodide, and was given on alternate days. The pain following the injection was considerable, but only lasted from five to ten minutes. The thickening of the tibia slowly diminished, and the pain accompanying it ceased after the first few injections. A month after discharge from the hospital the cicatrix was firm and the tibia had nearly resumed its normal size.

Some Observations in X-ray Work.

G. P. Edwards (*International Journal of Surgery,* October, 1903) in speaking of the therapeutic value of the *x*-ray says:

That in the hands of experienced operators, and with improved apparatus and technique, 100 per cent of primary skin cancers may be cured, and as the treatment does not destroy normal tissue, recurrences are of little concern, as the recurred growth yields much more readily than the original.

That lesions involving mucous surfaces, especially about the

head, are much more difficult to control, and until improved methods are devised for directing the ray upon inaccessible regions in the mouth and throat, not over 50 per cent of cures may be expected.

That lesions involving the cervix uteri and other accessible parts should be controlled by an intelligent, persevering, vigilant fight.

That deeply seated subcutaneous growths, adenomas, etc., should be controlled before dissemination.

That in all cases much relief from pain and other sensory disturbances, retardation of the progress of the disease, and improvement in general health may reasonably be expected.

That in accessible lupus vulgaris a cure may be expected in every case.

That lupus erythematosus is difficult and requires a treatment more radical and severe than is ordinarily demanded.

Abnormal Frequency of Urination Treated with Epidural Injections.

F. G. Valentine (*Medical Record,* Sept. 26, 1903) says that epidural injections with decinormal solution offer the most promising results in abnormalities of urination due to faulty vesical innervation.

That incontinence of urine, enuresis, excessive frequency of urination (unless due to other pathological conditions) can at least be ameliorated by epidural injections.

That, cautiously performed, epidural injections are in no wise dangerous to the patient.

Epidural injections are no more painful than any hypodermic injection with a mild solution.

Epidural injections can be performed by any one who follows the technique outlined, and is alert to those anatomical variations which are so frequent in the region.

The immediate effects of epidural injections are very rarely even disagreeable.

Treatment of Anemia.

Mamlock (*Zeitschrift für diat. und phys. Therapie,* Bd. vii, 1903) quotes Grawitz and Noorden as attributing chlorosis to a vasomotor neurosis, causing an increased amount of water in the

blood and the swelling and taking up of the fluids by the red cells in the bone-marrow. The author found the newly inaugurated treatment by sweat baths to be very beneficial where medicinal means had failed, though it is contraindicated in conditions of extreme exhaustion; in the latter cases an attempt at transfusion with human defibrinated blood diluted with physiological solution suggests itself.

The Treatment of Congenital Phimosis.

According to J. F. Woodyatt (*Lancet,* Aug. 29, 1903) congenital phimosis is caused by a constricting ring of mucous membrane just inside the prepuce, and the prepuce itself is never redundant and never causes phimosis. Accordingly the usual circumcision operation is condemned. The method advocated is to retract the prepuce as far as possible, then snip through the constricting ring of mucous membrane on both sides, and then convert the longitudinal incisions into transverse wounds by suturing after the manner employed in pyloroplasty.

PEDIATRICS.

UNDER THE DIRECTION OF CHARLES G. JENNINGS, M.D.,
Professor of Practice of Medicine and Clinical Diseases of Children, Detroit College of Medicine.

The Artificial Feeding of Infants.

R. Hutchinson (*Lancet,* Sept. 19, 1903) summarizes as follows:

(1) The first essential in the artificial feeding of infants is to have a definite plan upon which to go and to avoid haphazard procedures. (2) Diluted cow's milk, condensed milk, and peptonized milk may be regarded as the positive, comparative, and superlative of digestibility respectively, and should be tried in that order until the digestive power of the child is suited, due regard being paid to the details of administration above laid down. (3) Periodic weighing of the child is the only test of the success or failure of the food selected. (4) In cases in which even peptonized milk fails to give good results, great benefits often follow the administration of gray powder even in cases in which there is no reason to suspect a syphilitic taint. (5) In spite of all care in the use of the above methods there remains a residuum of cases

in which progressive wasting persists. Many of these seem to be babies who are unable to digest the casein of cow's milk in any form. (6) In such a case one should try to procure a wet-nurse for the child, and failing that one must eliminate casein from the diet by making whey the basis of the feeding mixture. (7) The use of a patent food as the sole article of diet for a baby is rarely if ever necessary so long as cow's milk can be obtained, either fresh or condensed. (8) If a child is unable to digest much cow's milk it is often worth while to try the effect of adding a little starchy food to the diet even at an early age, for inability to digest milk appears to be sometimes accompanied by an unusual capacity for the conversion of starch.

Infant Feeding.

C. M. Brown (*Buffalo Medical Journal*, October, 1903) says that the modification of cow's milk for infant feeding may safely be done at home under the care of the mother, or nurse of ordinary intelligence, and is preferable to guesswork.

It is based upon the known composition of mother's milk, and also upon the known dissimilarities between it and cow's milk, especially in the proteids.

The method of home modification and of calculating the percentages should and can be made extremely simple, and such modifications can be made sufficiently accurate and uniform.

The addition of cereals to the milk in the form of barley or oatmeal water is generally desirable after the seventh month, and is desirable before that age in some cases as an aid to the digestibility of the milk.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Hysteria as a Sequence or Accompaniment of Aural Suppuration.

Roepke (*Archives of Otology*, No. 4, 1903) at the meeting of the German Otological Society, in Wiesbaden, remarked that cases which develop hysteria during the course of otorrhea are

not unusual. A number of factors can be made responsible. The nervous system of a patient suffering from otorrhea may be damaged through irrigations, cauterizations, and curettings. In a similar way the trephining of the mastoid process and the after-treatment may act injuriously. The important moment for the development of the hysteria is the anxiety of many people suffering from otorrhea that an intracranial complication may terminate their life. The hysterical symptoms may in these cases simulate intracranial disease. The histories of five cases are given; in each hysteria has set in gradually or suddenly during otorrhea.

Opacity of the Cornea in New-born Children.

Jardine (*Archives of Ophthalmology*, September, 1903) draws attention to the cases of opacity of the cornea occurring in the new-born after forceps delivery, several cases of which have recently been reported at the Ophthalmological Society of the United Kingdom. He records two other cases. In one he noticed immediately after birth a marked linear opacity running vertically across the cornea, and a few fainter spots at one side. There was considerable hemorrhage into the anterior chamber. In the other case a faint opacity showed itself three days after delivery. He considers the condition caused by pressure with forceps, and in most of the cases delivery was accomplished in the Walcher position.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

The Occurrence and Significance of Cutaneous Hyperesthesia in Appendicitis.

James Sherren (*Lancet*, Sept. 19, 1903) offers the following conclusions:

(1) Cutaneous hyperalgesia is probably present at some time during all first attacks of appendicitis, except perhaps in the fulminating type, and demands upon tension within the appendix. (2) It may be absent in attacks after the first, if the first attack was of sufficient severity to destroy nerve tissue in the wall of the appendix. (3) When present in attacks subsequent to the first it

often persists long after all other signs of the disease have gone, owing to the tension within the appendix being kept up by the presence of a stricture. (4) It gradually disappears during convalescence as the other signs of the disease clear up. (5) Disappearance of cutaneous hyperalgesia without improvement in the general condition of the patient is a sign of perforation or gangrene of the appendix, and should be a signal for immediate operation. (6) The presence of cutaneous hyperalgesia is no contraindication to operation. Abscesses may form and general peritonitis may develop while it is present. (7) Its absence, on the other hand, is of great importance. Absence of cutaneous hyperalgesia, the patient coming under observation early in the first attack of appendicitis, is a sign of gangrene of the appendix unless the case is obviously a mild one and the patient is rapidly getting well. (8) Cutaneous hyperalgesia is, as a rule, absent in cases of abscess of the appendix. (9) The age of the patient and the position of the appendix have no influence upon the cutaneous hyperalgesia. (10) It is occasionally of use as an aid to the diagnosis of appendicitis.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

The Bacteriology of the Puerperal Uterus: Its Relations to the Treatment of the Parturient State.

S. Marx (*American Journal of Obstetrics,* September, 1903) concludes that the normal puerperal uterus is a sterile organ. The presence of bacteria in the absence of general evidence of constitutional disturbance means the introduction of such bacteria by accidental contamination. Their presence in the uterus accompanied by fever means in all probability sepsis arising from the uterus. Their absence in the presence of general symptoms means that we should look to other organs for the source, such as the vagina or vulva or some general disturbance accompanying the puerperal condition. He holds that the genito-urinary tract is at all times well protected in ordinary cases in healthy women, and only the operator's hands can be a source of infection. Intra-uterine douches cannot clear the uterus from infecting germs.

The only way to do this is to cause firm contraction of the uterus and limit infection, together with the use of a remedy to aid rapid absorption, and which, by its antiseptic properties, will destroy the germs. For this purpose he finds packing with reliable iodoform gauze the best method.

The Etiology of Inversion of the Uterus.

A Schauta (*British Gynecological Journal,* August, 1903) has long held that inversion is brought about by the same and no other factors, whether it happens independent of childbed or during that period, and especially that contractions do not play any part in causing it. In this article he defends this view and criticizes the various objections that have been brought against it by Treub, Thorn, and others. In Schauta's opinion every step in the process of inversion presupposes a relaxed condition of the uterus and the absence of contraction of any kind. The factors to be considered are temporary or permanent paralysis, atrophy, degeneration, and thinning of the uterine wall, which last may be due to myomatous growth. The invagination is then brought about by pressure or traction—the former due to the gradual or sudden action of abdominal pressure, the latter by some such cause as a myoma. An absolute condition should be possible; in the preliminary preparation of the cervix, contractions of the uterus may or may not play a part.

Spontaneous Perforation of Pyosalpinx into the Bladder and its Treatment.

Tanverghe (*Centralbl. f. Gyn.,* No. 26, 1903) discusses the following methods of treatment:

Dilatation of the urethra and of the fistula, with irrigation and drainage of the suppurating sac. This method is not recommended on account of the danger of permanent incontinence of urine, and of perforation of the sac and infection of the peritoneum. This, it is true, is not dangerous, and has the advantage of affording free discharge to the pus, yet it may not bring the fistula within reach, and a subsequent plastic operation may be required.

Laparotomy. This he considers the best method, as by it one is enabled not only to remove the focus of suppuration completely, but also to close the vesical fistula.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D.,
DETROIT, MICH.

Attending Neurologist to Harper Hospital.

Results of Brain Surgery in Epilepsy.

The sensational claims put forth in some quarters as to the (alleged) marvelous effects of brain surgery in epilepsy and congenital mental defect receive something of a jar from the cool and dispassionate review of the subject by Wm. P. Spratling, of the Craig Colony of Epileptics (*American Journal of Insanity*, July, 1903). Calling attention to the necessity of more concisely defining the class of "epilepsy" to be considered, and that other types than Jacksonian and cases of grand mal should be discarded, he reviews the results in thirty-three cases of operation.

Of the thirty-three cases cited, twenty were due to trauma. The average duration of the epilepsy prior to operation was 5½ years. The results were noted in no case less than eleven months after operation. In twenty-one no improvement in the disease, either temporary or permanent, was noted. In eight the attacks were lessened in severity and frequency, the operation however being only a part of the treatment. In three the disease was much worse after operation.

In one only was there apparent recovery. He does not regard the success as bright, but "in idiocy and imbecility," he says, "its hue is more sombre still."

Citing many cases, he fails to find a single case of congenital mental defect in which a normal mental status was established through surgical intervention, and concludes thus: "Surgical interference may still be used in isolated cases of idiocy, but it seems clear that it is slowly finding its position in rational treatment along a plane far lower than seemed possible at the time of its inauguration."

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THE USE OF IODOSYL IN PLACE OF IODOFORM.—From my observations the class of ocular diseases in which Iodosyl proves especially effective is that of ulcerations of the cornea. I have witnessed results following its application that were pleasant surprises to me, in cases where other remedies had failed. In this connection I report the case of J. S——, aged eighty-three, of Ontario, who entered St. Mary's Hospital August 8, 1902, with the history of having suffered for six weeks from a deep spreading ulcer of the right cornea, accompanied by intense pain. His family physician prescribed for him, but the condition of the optic became gradually worse and worse, until finally he advised his patient to go to Detroit, and have the eye enucleated, and thus end his sufferings. An examination of the eye revealed a deep infiltrated ulcer of the cornea, involving its center and upper half, and a network of vascular tissue almost covering the remainder of the cornea. Plastic iritis with posterior synechia was also present. Tension of eyeball normal. Palpebral and ocular conjunctiva congested and thickened, but no suggestion of trachoma. Patient complained of suffering severe pain in and above the eye, and his appearance showed plainly the results of this. He was placed under general tonic and reconstructive treatment, the ulcer curetted, atropine drops, insufflations of calomel, and hot applications to the eye. August 15 the patient's condition was not improved. Eserine drops one-tenth of one per cent were now included with his other treatment. For the next month he continued to remain in the same state, in spite of all my efforts to bring about an improvement. On September 20 the eye was attacked by increased inflammatory action, and marked hypopyon. Iodosyl Ointment (6-per-cent) was ordered to be applied to the affected eye twice daily, and with the exception of the hot fomentations all other local medication stopped. On September 25, condition of the eye decidedly improved. Hypopyon has disappeared, and patient states that he is now free from pain, for the first time in weeks. October 21, cornea clearing rapidly, and now hardly any marks of former ulceration. November 10, patient departed for his home, with eyes that hardly differed from each other in appearance, although the vision of the right eye was reduced to counting fingers at fifteen feet, owing to organized lymph almost occluding its pupilary area. —Extract from a paper read before the Wayne County Medical Society, Dec. 22, 1902, by DR. R. W. GILLMAN.

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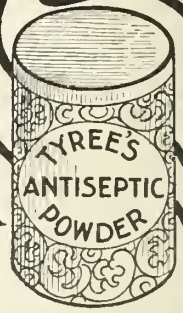
HAY FEVER



There Are Many Theories

regarding the causation of HAY FEVER, including Uric Acid or other depraved state of the system, Micro-Organisms in the air and pollen from plants. Whatever theory is adopted and a systemic treatment undertaken to correspond with it, it has been found that intelligent local treatment is productive of great benefit. ¶ For this purpose a thorough washing or douching of the nasal passages with a weak hot solution of **Tyree's Antiseptic Powder** has been found very beneficial. It cleanses the membrane of poisonous secretions, soothes its irritability, and tones it up and strengthens it to resist further invasion. By frequent repetition as soon as any feeling of discomfort begins to return, the attack can be greatly shortened and the patient made comparatively comfortable throughout its duration.

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and stings, itching piles, and in the various skin troubles for which ointments are used.

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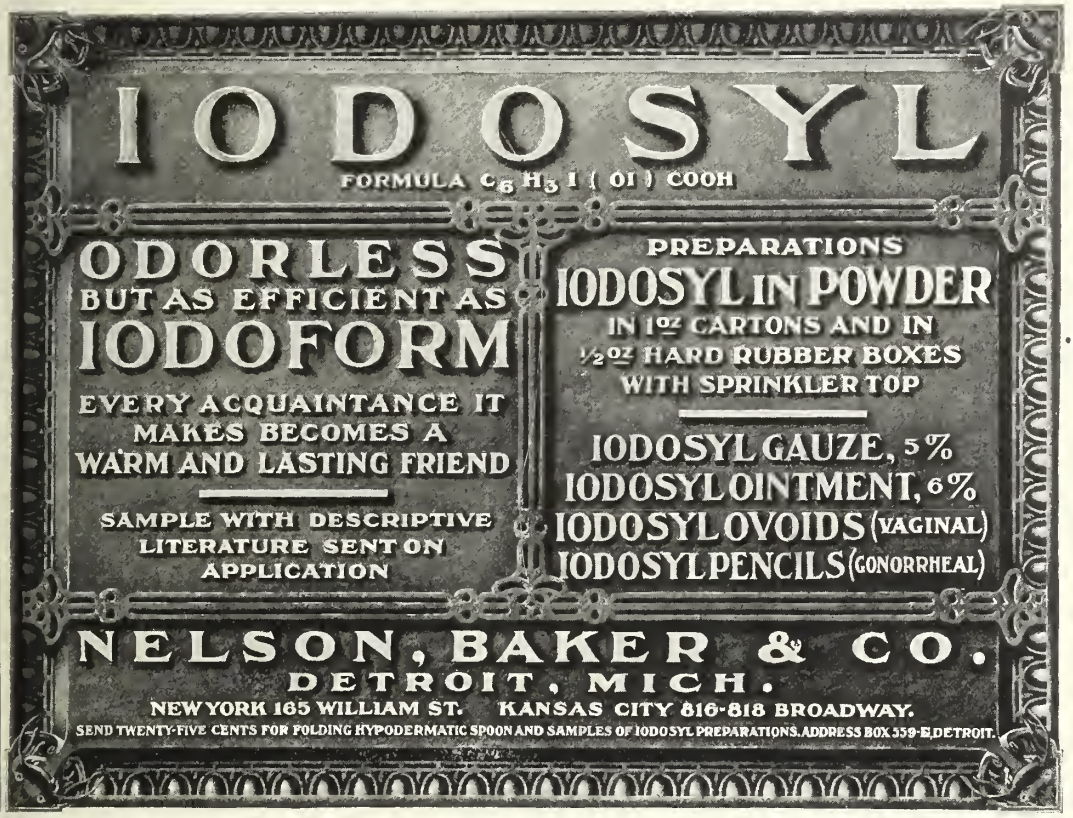
The general results of the recent discussion in this paper on the relative value and safety of various antiseptics derive confirmation from a monograph which we have received from the Pasteur Institute of Paris. We described the volatile oi essential oils of plants as the safest—and the most pleasant, might have been added —of antiseptics for direct human use; that of eucalyptus holding a very high place A couple of professional members of the Association of Analytical Chemists of the Pasteur Institute have been studying Listerine, which is named after the great English surgeon. Listerine is a mixture of the essential oils of thyme, eucalyptus baptisia, wintergreen, and mint. It has relatively non-toxic properties peculiar to these oils, but the Parisian savants have brought out the important fact that the mixture of oils is much more potent than any one of them singly. It attacks more than one joint in the bacterial armor. Carbolic acid—used so much mainly because it is the original antiseptic employed by Lister—is 146 times as toxic as Listerine. —Excerpt from the London *Daily Chronicle.*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Case 1.—A boy, eleven years of age, had suffered for a day from headache and fever, with pain on swallowing. Both tonsils were red and swollen, especially the right, which was studded with patches of exudation from the crypts.

Case 2.—A girl, aged fifteen years, had had a chill twenty-four hours previously, her throat felt sore, and it pained her to swallow. The glands of the neck were swollen and there was fever. Both tonsils were considerably enlarged. The crypts were exuding their characteristic discharge.

Case 3.—A young woman, nineteen years of age, was attacked by vertigo and lost consciousness. Twelve hours later both tonsils were found greatly swollen, almost meeting in the middle line. The cervical glands were moderately enlarged. The surface of the tonsils was dotted by exudation.

These three cases were all treated successfully with Glyco-Thymoline as described above.—GEO. A. HEWITT, M.D., Philadelphia, Pa.

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UNDER the title of "A New Form of Antiseptic Treatment of Wounds," Dr. C. L. Schleich, of Berlin, the originator of the Glutol method of wound treatment, first described the material and its properties thus: When gelatin dissolved in water is dried in the vapors of formalin, a new chemical compound of peculiar properties is formed. It is no longer gelatinous, but has become stable, very hard, and transparent. It cannot be liquefied by either dry or moist heat, nor is it changed by the action of organic or mineral acids, alkalies, or salts of any reaction. It is no mere mixture, but a chemical combination of the formalin with the gelatin; for hyphomycetic fungi have been observed to grow upon its surface, and it does not hinder the development of any bacterial growth with which it may be mixed. It is evidently in itself non-antiseptic and non-toxic; and it occurred to Dr. Schleich that if it were possible to cause this formalin-gelatin to release its formalin within the organism, the tissue cells might be caused to prepare their own antiseptic out of a non-antiseptic and non-toxic material.

He found that when the formalin-gelatin was introduced into the animal body it was finally completely absorbed; the leucocytes, tissue fluids, and very vascular new connective tissue dissolving a substance so resistant to solvents outside the body. Peritoneal implantations showed no traces of cheesy degeneration, but only a formation of connective tissue around the shrunken remains of the foreign body. It was also ascertained that whilst the Glutol did not interfere with the growth of cultures of staphylococci, streptococci, fowl-cholera organisms, etc., the cultures mixed with the Glutol powder could be inoculated on pigeons and dogs, and be absorbed without any reaction at all.

Schleich then tried the formalin-gelatin in the treatment of wounds, and found that it answered all his expectations. The human body decomposed it with a slow, continuous liberation of nascent formalin just as the animal body did; the antiseptic is set free molecule by molecule, forming

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a practical and extremely rational mode of wound sterilization. In this it differs entirely in principle from ordinary antiseptic procedures, the action of which is temporarily energetic only, and is soon terminated by the formation of insoluble combinations of the tissues and the materials used. Schimmelbusch has conclusively demonstrated that the infectious organisms inevitably left behind, no matter how thorough the sterilization, grow vigorously under the protection of these insoluble compounds on a soil predisposed to harbor them by the irritation and inflammation caused by the antiseptics.

The Glutol itself was found to be an absolutely indifferent body, readily sterilizable, and without irritant or toxic effects. The body cells resolve it into its constituents; the more active the cells, the more formalin is set free, so long as the powder lasts. Thus a continuous stream of formaldehyde permeates every crevice and corner of the wound under the dressing. Virulent cultures mixed with Glutol can be incorporated in wounds without disturbing the reparative processes; the continuous stream of formaldehyde destroys the noxious organisms as they develop.

Turning now to the clinical use that Dr. Schleich made of the new antiseptic, we find that he employed it in one hundred and twenty acute suppurative cases, ninety-three aseptic wounds, four complicated fractures, and two deep scalp wounds. Even in complicated cases mechanical cleansing followed by dusting the powder over the entire surface of the injury satisfactorily replaced the usual strict antiseptic technique; in suppurative cases the inflammation ceased in twenty-four hours. Complicated fractures ran their course aseptically, and without fever.

In uninfected wounds a perfectly dry and firm scab is formed in a few hours. Infected wounds become soft, the skin around them is not reddened, and furuncles, carbuncles, and abscesses, if present, are under complete control twenty-four hours after the powder has been placed in contact with the tissues. A very no-

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ticeable fact in these cases is that the blood on the dressings remains bright red, undried, and undecomposed; formalin alone possessing the property of thus preserving the red blood corpuscles.

Dr. Schleich considers that the most appropriate field for the new antiseptic is in the acute inflammations, and for the prevention of infection. He no longer disinfects fresh wounds, but leaves the tissues to themselves, and to the powder. Repair is so satisfactory that the most critical eye can detect no fault therein.

In cases where necrotic tissue is present in the wound, as in old leg ulcers, and in the specific infections, such as tuberculosis and syphilis, the formalin-gelatin is inactive. Dead tissue, and masses of dried secretion, keep the gelatin from contact with the living cells, and hinder the automatic development of the antiseptic. Basing his procedure upon the fact, which he determined with the help of Dr. A. Gottstein, that hydrochloric acid pepsin solutions are capable of decomposing Glutol outside the organism, Schleich moistens the powder on the surface of the wound when the above conditions are present with the following solution:

Pepsin, 5.0 grammes (75 grains).
Acid. hydrochloric. pur., 0.3 gramme (5 minims).
Aqua destillata, ad 100.0 grammes (3½ ounces).

This effects the molecular disintegration of the Glutol, and the consequent continuous evolution of formalin that the paralyzed or necrobiotic cells cannot accomplish.

Dr. Schleich summarizes his method as follows:

Glutol forms a firm eschar in a few hours in uninfected wounds, without further disinfection; thus it enables us in the very shortest time to obtain a firm, resistant, and non-infectable scab after primary suture of wounds. Where cellular life is active Glutol kills the bacteria that may be present with the greatest certainty, by reason of the molecular antisepsis that it affects. It stops purulent processes inevitably, if after incision and irrigation

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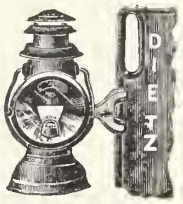

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the cellular activity and formalin vapor production continues without interruption. And when this is prevented by the presence of abundant necrotic tissue, cell activity can be replaced by pepsin hydrochloric acid digestion.—*Therapeutische Monatshefte*, Berlin, February, 1896.

The following are a few cases:

Case 1 (Dr. Edm. M. Saalfeld). Diabetic with numerous extremely recalcitrant abscesses appearing on various portions of the body. Many of them were grouped, and absolutely undermined the skin. Treatment even for a year could not effect healing. Dr. Henry evacuated the pus in one of them with a syringe, and packed the cavity with Glutol. It was cured without there being any necessity for reopening it. Encouraged by this result, several other abscesses were treated in the same way with the same success.

Case 2 (Dr. Perrault). Wound of the hand gotten from an animal affected with a contagious disease. Deep cauterization of wound with ferrum cawdens next day. The burns did not heal, as the patient continued to work. Two applications of Glutol, on two evenings, cured them in two days.

Case 3 (Dr. Perrault). Deep wound running from the angle of the maxilla to the middle of the chin. Hemorrhage checked by cobwebs; sutures badly applied; suppuration. Application of Glutol, and cure in three days.

Case 4 (Drs. Wittkowski and Steiner). Male, aged eighty-three. Ulcerated cancroid of the cheek, hard as a stone, for twenty years. All manner of treatment unavailing. Dr. Wittkowski did an extensive extirpation, applying nothing but Glutol and sterilized gauze from the first. Dr. Steiner, who continued the treatment, applied borated vaselin; the granulations became soft, and the epidermis formation was retarded. He then curetted the parts superficially and reapplied the Glutol. The case progressed rapidly to a cure.

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THE MEDICAL AGE

VOL. XXI. DETROIT, NOVEMBER 10, 1903. NO. 21.

ORIGINAL CONTRIBUTIONS.

THE MODERN TREATMENT OF EPILEPSY.

BY WILLIAM F. WAUGH, M.D.,
Professor of Practice, etc., Illinois Medical College.

There are a few basic principles that obtain in the treatment of disease, so firmly established that the waves of popular opinion have little or no effect upon them. Among these is the necessity of a search for and removal of sources of reflex irritation in the treatment of epilepsy.

The two elements of the malady that are to be considered by the therapeutist are the increased irritability of the nervous system and the presence of causes of irritation. Among the latter are to be numbered all those genito-urinary abnormalities that mean so little to the normal person but so much to the epileptic. Adhesions of the prepuce in either sex, phimosis, undescended testicle, urethral stricture, prostatic hyperesthesia, gravel, any lesion however slight and inconsequential, is to be removed as completely as possible. The intestinal canal furnishes a full assortment of excitants, all varieties of worms, constipation, overeating, bulimia, contraction of the anal sphincter, piles, fissures, polypi, ulcers—any and every deviation from the normal may be a source of these discharges of nerve force we term convulsions. And so every part and organ of the body is to be examined minutely and every deviation from health to receive its appropriate treatment.

The habits are next to be corrected; and here there is sure to be difficulty. The epileptic is usually obstinate and self-indulgent. He wants to eat hugely, of meats and other rich foods especially. He likes to indulge all his appetites inordinately, and is impatient of control. In fact, I have often wished I could have my patient

in an asylum with complete control over him long enough to effect the needed reforms in his sanitation and habits. It is impossible to particularize further than to say that the laws of personal hygiene must be rigidly enforced. Every species of excess must be avoided absolutely.

The regulation of the bowels comes next, and may be a task of no slight difficulty. Encysted scybala sometimes resist an amount of medication and flushing that is past belief to the uninitiated.

Modern researches have shown the importance of excluding salt from the diet. No one now expects to "cure" epilepsy by administering an ounce of potassium bromide each twenty-four hours; but when the salt has been cut off the use of five to ten grains of sodium bromide, as salt for the food at each meal, gives all the advantages of the bromides without drenching the system with this powerful vitality depressant. All that is to be expected from the bromides in any event is the lessening of nervous irritability, rendering the patient less susceptible to the exciting causes of convulsions—the method is in no sense curative.

While the bromides have long held the first place as sedatives in this malady, they are not the only ones nor always the best. The more I use the hydrobromate of cicutine the more I am convinced of its utility. It has none of the disadvantages of the bromides and is more manageable; and as to its efficacy I am inclined to value it equally with the more popular remedies. Gelsemin is another useful sedative. All three partake of the property of sedating the sexual function, and this is in many cases most desirable, as these patients are apt to be excessive in this regard.

Many epileptics are plethoric, and here veratrine is well administered. The curious disappearance of uric acid from the urine before an explosion renders it advisable to pay especial attention to the agents which increase the excretion of this substance, and veratrine and colchicine are among our most reliable remedies for this purpose.

Is there any field remaining for the action of specifics? The foregoing so fully covers the field that I feel tempted to stop here. But there is one remedy whose action in some cases of epilepsy seems too well proved to permit it to be neglected, and yet its mode of action is not at all explained. This is verbenin. It was introduced to my notice some years ago by Dr. H. D. Fair. After this Dr. French, of Carbondale, took it up, and reported some undoubted cures in which verbenin figured largely. He attributed

the epilepsy to intestinal parasites of the maggot family, and believed verbenin acted upon these. A number of other cases have been reported in which verbenin proved useful, in which the parasites were not noticed, though I am not sure they were searched for in all cases. While some failures have been reported, this is not to be wondered at, in dealing with a newly introduced remedy whose action, physiologic and therapeutic, is as yet undetermined. That it has sometimes succeeded is the interesting point.

I have been unable to find anything to show what effect verbenin exerts on the vital functions. The directions I have given in advising this remedy are to give one-third of a grain four times a day, and add one-third of a grain a day whenever a fit occurs. Some persons report having reached doses of 19 grains a day without notable effects; but usually before three grains a day have been reached the good effects of the drug are manifested in the gradual lightening and final cessation of the convulsions.

Not all cases have done this well. There are doctors and doctors; and we all know how negligent many are to the preliminaries set forth in this paper. They will neglect the fundamental principles of treatment, and then condemn the method, affirming that they have fulfilled all the requirements. I do not mean to charge them with wilful deception, but they forget, or consider things of no importance that are absolutely essential. Every physician who does consulting practice knows what I mean. Here is an instance: A delegation once visited me to consult me about an epidemic of malignant diphtheria in a mountain town of an eastern State. I inquired as to the hygiene, and was assured it was perfect. "How about the drinking-water?" "Absolutely pure; a mountain stream with no possible sources of contamination." But I had my doubts. So a representative of the State Board of Health paid them a visit, and found the town supplied by a stream of water which first drained the water-closets of a number of houses in which diphtheria had existed! And this they had overlooked.

When a man tells me he has failed to cure an epilepsy I think he may have really attended to the preliminaries, but I cannot help feeling that if I had that case under my eyes I could find some source of reflex irritation he had overlooked. Perhaps not—our knowledge of physiology is too imperfect for that. But repeatedly it has been my fortune to detect perhaps trifling abnormalities, without any evident connection with the case, whose cure removed the difficulty.

Great is the power of habit, and nowhere more than in dealing

with epileptics. Even if the exciting cause is detected and removed the fits may, and almost surely will, continue from habit. It is all-important therefore that the habit of fits be broken up as speedily as possible. The minute directions as to diet and avoidance of irritants is of vast import. In two of my cases the fits had ceased and all was going well, when indulgence in dancing was followed by a return. A gastronomic gorge, a sexual indulgence, may mar the best laid plan. It is well known that many epileptics only have fits at first during the sexual orgasm. As the fit habit becomes confirmed other causes will arouse them.

In this connection it may be well to call attention to a remedy which has been termed "antiepilepsy." It is composed of atropine and glonoin, 1/250 grain each. The first stage of a convulsion consists of a cerebral vasomotor spasm, with cerebral anemia. If the cerebral capillaries are powerfully dilated by this combination, it is obvious that the second stage cannot supervene. This remedy has proved quite effective, the patient carrying it about and taking one or more granules whenever the fit threatens. The glonoin flushes the face almost instantaneously, and this effect is sustained and prolonged by the atropine. By this means the convulsion is jugulated at the start. After the patient has learned to rely on this most powerful and effective remedy he finds it acts even better than at first, so that in time the knowledge that he has an unfailing means of preventing the development of the convulsion will suffice to allay the irritability, without his having to have recourse to its administration. In this it falls into line with remedies in other neuroses.

Unless doctor and patient alike have perseverance it is not worth while to attempt the treatment of a case of epilepsy. Transient treatment is useless. Discouragement at the recurrence of the convulsions renders the therapy nugatory. Time is essential. The man who said it required as long as the malady had previously existed to effect a cure was a wise and experienced physician, though of course this was an exaggeration. But it is well to warn the patient of the slowness of the cure, so as to prevent discouragement. But with this, I look upon this disease as by no means hopeless; in fact, it is one where the physician can do wonders if he be indeed a true physician.

Chicago, Ill.

THE SIGNIFICANCE OF EYE SYMPTOMS TO THE GENERAL PRACTITIONER.*

BY E. H. PORTER, M.D., TIFFIN, OHIO.

The eyes are among the most important organs of the body to indicate to the general practitioner coming or present disease, as by their quick response to the slightest changes they may give a positive diagnosis of disease far remote from themselves long before it can be detected in any other way or through any other organ.

Patients are constantly presenting themselves to every practitioner suffering from the various forms of asthenopia and its attendant train of symptoms, with headache perhaps the chief one, symptoms often dependent upon diseases other than those of the eye itself. The nervous strain of the present day, the high tension at which the American youth of both sexes is driven, the long hours of labor among our shop-women in cramped positions, working every day no matter whether at the time of their menstrual flow or not, gives every one of us food for thought; and it may not be amiss to call your attention for a few moments to some of the prominent symptoms of a few diseases of general interest to every one that are constantly coming to our notice.

I am asked the question almost every day, "Why is it that we have so many diseases of the eye to-day, and so many people wear glasses, when a few years ago they were worn only by old people?" I answer, because we understand diseases of the eye far better now than ever before, and because the jewelry stores and even large department stores are extremely anxious to sell goods. I know that the tendency of to-day is to correct many cases of astigmatism and slight hyperopia that would be far better left uncorrected; and again, there are a great many cases where glasses or some special treatment for the eyes is needed that are totally neglected until the whole gamut of possible disease has been covered, and the eyes are thought of as the last resort. It is a pity that a happy mean cannot be taken, and plain common sense be used by all of us by taking the middle ground, and not going to extremes on either side.

Often the first symptom of eye disease is headache. It may be ascribed to a multitude of causes, eye-strain, spasm of the

*Read before the Seneca County Medical Society at the August meeting.

accommodative muscles, or to astigmatism. Muscular imbalance is a most frequent cause, and some nervous derangement of the choroid or retina may be a causative factor, or it is often dependent on some totally remote pathological condition. Among the most common causes of this kind are the headache and eye trouble which spring from anemia or other constitutional disease. In my opinion no conditions are responsible for so many forms of eye-strain and its attendant symptoms as those which are the result of an impoverished condition of the blood that controls the fundamental reflex disturbances so often seen in anemic patients, unaccompanied by any marked disturbance of refraction. Anemia always means a lowered vital tone, and if the eyes are improperly used when such a condition exists there is sure to be trouble. (See editorial in *Journal of the American Medical Association*, Oct. 3, 1903.)

The early advice of physicians to parents as to wholesome living, with air, sunshine, less books, and more exercise, and whatever medical attention is necessary to keep in motion a rich oxygenated blood-stream, will do more to prevent refractive errors or stop those that are in their incipiency than any other one thing, and will prevent all sorts of ills that are ascribed to the eyes and do not belong there. Very often after the best efforts on the part of a physician to correct some form of conjunctivitis or other disease, large doses of iron or Fowler's solution will do wonders with the proper accessories. It is also necessary to do what is demanded by the eyes in addition to the general treatment. A prominent insurance agent some time ago began to lose his sight and consulted the best oculists in the country, who diagnosed his case as one of progressing atrophy of the optic nerve. He tried their treatment in vain, and was gradually getting worse. Finally he went to Paris and consulted one of the eminent specialists there, who pronounced his case one of anemia of the optic nerve. Appropriate treatment cured him, and a personal examination a few days ago showed a normal fundus.

A patient was referred to me the other day whose chief symptoms were a continual blurring of the sight and a constant fog before the eyes. I made a careful examination and found beginning lenticular cataracts. On careful questioning for some possible cause for them, I found that he was passing more urine than usual, which on examination was found to be loaded with sugar. The cataracts were undoubtedly diabetic in origin, and my colleague had failed to associate the disturbance of vision with the general condition of the kidneys. I referred the patient to his

physician for treatment, and requested him to see me again in two months, at which time he was greatly improved. Later, however, he developed a general anasarca and died. I know of no class of disease that has a more profound effect on the structures of the eye than that of renal origin. Polyuria, glycosuria, diabetes insipidus and mellitus, and the more profound affections of the kidney parenchyma all affecting the delicate coats of the eye sooner or later.

Miss C——, aged eighteen, presented herself with the following history: For more than a year she had been having a series of hordeola, and had tried everything for their relief. She had been properly refracted, and ophthalmoscopic examination showed a normal eye ground. After a careful search I detected a small spot in the macular region in the left eye and suspected diabetes. The urine was examined and the diagnosis confirmed. After a course of appropriate treatment the urine cleared up, and the lids were freed from the styes.

K. G——, aged twelve, a schoolboy, was brought to me by his mother, who had noticed for some time that his left eye was immovable outward, resulting from a complete paralysis of the externus muscle. On examination, a history of kidney trouble was found. Urinary examination showed a pronounced diabetes. Whether the paralysis was due primarily to the diabetes or to the cerebral disease dependent upon it I do not know; at any rate, there was no improvement under treatment, and the eye will remain in its present condition as long as the patient lives. Iritis from diabetes is not uncommon; cataract may be found, and floating bodies in the vitreous are not uncommon from this source.

It is a well established fact that some lesion of the fourth ventricle has some governing power over the pathological presence of sugar in the system, and if that is so may cause ocular paralysis, hemianopsia, optic neuritis, and hemorrhagic retinitis.

In no class of cases presenting themselves to the general practitioner are the eyes better prognosticators than in the different forms of Bright's disease. So subtly does the onslaught of this dread pathological condition come that the damage has often been done before treatment is begun, and only palliative measures are at all successful. Albuminuric retinitis may be found in all forms of nephritis, and is usually present. An engorgement of the papilla with hyperemia of the retina and minute white spots running in radiating lines, together with dimness of vision, is invariably indicative of some form of nephritic trouble. Ophthalmoscopic examination will often show a beginning nephritis that will

baffle all other methods of diagnosis, and it is essential that every man in general work know how to use this instrument skilfully, as with it he is additionally strong in his diagnostic armamentarium. A great many cases of transient kidney disease pave the way for lesions in the eye that may not be present directly with the other trouble. If recognized in time and treated correctly, prevention of more serious forms in the future will positively be assured.

Before considering some of the other diseases of especial interest to the general practitioner, I want to mention one that is almost always seen by them first—glaucoma. Why do not more of the men in general work recognize this disease in its incipiency? Thousands of eyes would be saved and hundreds of homes made happy by keeping blindness from them. A typical case will tell exactly what I want to bring before you. Mrs. A——, aged sixty-five, mother of several children, had been in poor health for a number of years. She was nervous in disposition, and her whims and fancies had been catered to for a long time, subsisting largely on prepared foods. One night she called her family physician to give her relief from a terribly sharp boring pain in the eyes and forehead. She could not take morphine in any form, and mild analgesics were given with instructions to bathe the eyes in hot water. The next morning the patient had marked photophobia, a large sluggish pupil, and conjunctival engorgement. She was told that she had a cold in the eyes, and that it would pass away in a few days. A boric acid wash was given and cold applications ordered in place of the hot. Then, gentlemen, was the time for the eserine and plenty of it, as it would have aborted the attack and prevented the inevitable operation. The next morning the patient was no better, had excruciating pain in the eyes, and complained of their feeling hard. This condition continued for four days, when I saw her. It was a case of absolute fulminating glaucoma in both eyes with tension plus 2 or 3; vision reduced to the merest perception of light with the characteristic enlargement of the pupil. An immediate double iridectomy was performed, with a happy result. Four months afterward she could read ordinary newspaper type with properly fitted lenses.

Sharp boring pain, dilated pupil, photophobia, hyperemia of the conjunctival blood-vessels, ciliary injection with increased tension, are the danger-signals of glaucoma. Don't delay a minute. Use salts in large doses, and beg, borrow, or steal some eserine or pilocarpine and use it plentifully. Send your patient to some eye specialist in whom you have perfect confidence, if you

cannot do what is absolutely demanded by the case in order to save the eyesight.

Another class of cases of especial interest to the general practitioner are those presenting a train of symptoms due to some acute or chronic condition produced by the use of various poisonous substances. Toxic amblyopia is a very common affection, usually due to the excessive use of tobacco, with an additional factor which is very important, the imbibition of a large quantity of malt liquor. It is strange that the spirit drinkers are not so often affected as those who take large quantities of ale or beer. Trouble with the eyes in excessive tobacco users may be ascribed to nicotine poisoning. Cloudiness and dimness of vision and the inability to read even with strong convex lenses where there is no cataractous growth always means some affection of the optic nerve, which can never maintain its function if the sheaths of the nerve fiber are destroyed. Optic neuritis may be easily diagnosed with the ophthalmoscope, and with appropriate medication, continued for a long period of time, some vision may be retained or regained. Another frequent cause of amblyopia is the excessive use of strong coffee, especially by the young. In suspicious cases stop the coffee and watch the result.

Of late there have been a number of cases reported, especially among the colored people of the South, of total blindness following a ginger jag. In some of the Southern States it is hard for the colored people to get liquor of any kind, and unscrupulous pharmaceutical firms have taken advantage of the fact and have put on the market an inferior grade of ginger in methyl alcohol. This drug, or rather poison, invariably attacks the optic nerve tissue, and destroys it, producing total blindness in an extremely short time. Various other drugs, either taken intentionally or administered in overdoses, produce marked changes in the eye tissues.

Another class of cases the symptoms of which especially interest the general practitioner are those present in some of the more common constitutional diseases. The recent epidemic of measles and the constantly recurrent history of eye disease from measles bring this disease especially to our attention. No disease of childhood and no constitutional disease at any age, except syphilis, can produce such disastrous results in the eyes. In the prodromal stage, photophobia, lacrimation, and a marked conjunctivitis are invariably seen, and with these symptoms comes a weakened condition of the muscle of accommodation. Especially in weak strumous children are the eye symptoms of measles most marked, and all forms of keratitis and blepharitis may follow in its wake.

The necessity for each and every one of us to take more care of the eyes in measles is apparent, and protection from the light and appropriate treatment for the conjunctivitis are demanded and will prevent the necessity for glasses later in the majority of cases.

In diphtheria the symptoms of the disease may be most profound in the eye, or may show themselves only after weeks of prodromal difficulty. Passing the diphtheritic conjunctivitis with but a word, it brings us to the paralysis of the eye muscles and muscle of accommodation, so terrible in its results and so insidious in its onslaught. The recent epidemic has presented a number of such cases, twelve having come to my notice in the past five months. The diphtheria ptomaine has an especially violent action on the ciliary muscles, and at the same time very often produces a paralysis of the uvula.

K. G——, aged ten, was brought to me by his mother for failing eyesight. He was unable to read anything in school and was getting worse all the time. His vision was reduced to about 1/200 for distance and could not see any print at all. The fundus through a somewhat enlarged pupil was perfectly normal in both eyes, and history negative as to a positive cause. Finally the mother said that about six weeks before he had had a bad cold and sore throat. No physician had seen the patient, and the whole trouble had passed away in a few days. Nothing more was thought of the difficulty with the throat. The paralysis of the sphincter pupillæ was here complete, and was undoubtedly one of postdiphtheritic character. Under the routine treatment he rapidly recovered, and in three months had normal vision for distance and for near work.

Two other diseases have prominent eye symptoms which are of vital importance to every physician, whoever he may be—syphilis and tabes, so intimately associated in many particulars, and possibly the one being the direct result of the other. Syphilis may cause eye symptoms at any age or at any time, from the initial chancre, which is often situated on or near the eyelid, to the most complicated form of paralysis due to some lesion of the cortex or cord. Total blindness is common in syphilis, and plastic iritis with involvement of the uvea is sometimes caused by something else. It usually appears between the second and ninth month after the initial lesion, is prone to recur, and usually responds to treatment.

The symptoms of syphilis in the eyes are legion, from the mucous patch to a profound retinochoroiditis. Photophobia, distortion of the form of objects, flying specks and lights before the eyes, may all come entirely from specific lesion of the choroid

and will respond to antisyphilitic treatment. Frontal headache is another manifestation of the disease, as well as sharp, shooting pains or a dull heavy feeling in the eyes. A prominent physician in Toledo once told me that nothing in his experience had so often relieved headache and pain in the eyes in certain cases as gradually increased doses of potassium iodide.

Mrs. B——, aged forty-two, one healthy child living, was sent to me by a colleague for relief from a terrible pain in the right eye and a dulness most of the time over the other. I examined the case as carefully as I knew how, and confessed that I had not the remotest idea what was the cause of the trouble. She had been a patient in a sanitarium for some months with stomach and bowel disease, and had consulted physician after physician with no permanent relief. Galvanism, faradism, *x*-ray, complete rest, etc., were tried with no results. One day her husband happened in with his wife and said, "Doctor, a physician in California once gave Mrs. B—— some little yellow tablets, and they seemed to do her more good than anything that she ever took." I immediately thought of the Toledo specialist's advice, and sent her to her regular physician for large doses of potash and iodine. In two weeks she was back, smiling, for a pair of glasses so that she could sew again. People will continually lie about having had syphilis. A little anti-treatment cannot do any vast amount of harm, and may do a world of good.

The first positive indications of tabes are often found in the eye, the symptoms either preceding or accompanying other early manifestations. In all cases there are pupilary disturbances, generally a paralysis of some one of the ocular muscles. Dimness of vision and atrophy of the optic nerve are almost always present, and an early diagnostic sign is the minute change in the disk, which becomes grayish-white in color and loses its regular outline, becoming slightly cupped usually at the outer side. Accompanying the visual changes in the disk there is always a marked contraction of the field of vision, and often scotomata and general color blindness or loss of color sense present. The use of the perimeter is of great importance, for very often the narrowing of the fields for the green and red is the first symptom of coming ataxia. Any one or group of the ocular muscles may be paralyzed, a ptosis may result, or some other manifestation of disease be present, that may remain in spite of treatment, or respond to it. The following case may be of interest:

Mr. M——, of Findlay, was led to my office by his brother. He was a robust man of forty-two years who had never been sick

a day, except six years ago, when he had a fall from a load of fodder, striking his head. He was not confined to his bed at this time, but complained of giddiness and a constant dull feeling there, with loss of memory and difficulty in walking. His recovery seemed to be perfect, and he had had no trouble till six days before I saw him. He awoke one morning after a good night and found that he could not see objects out of the right eye. The vision slowly returned during the day, but with a marked diplopia. The difference in the height of the pupil of each eye was marked, the left being about one-eighth inch higher than the right; the pupils were contracted; vision in each eye almost normal, but fields contracted. Color blindness for red and green existed. There was a paralysis of the inferior rectus in the left eye, and it required a 40-degree prism to produce binocular vision. The memory at this time was faulty, but all the other faculties seemed to be normal.

He had probably had some slight hemorrhage in the brain, and the extreme diplopia was the result of pressure from a blood-clot on or near the governing nerve trunks of the superior and inferior rectus muscles. I suspected tabes, and the ophthalmoscope showed a grayish-white disk with contracted blood-vessels. The knee-jerk was decidedly diminished, and Romberg's symptom marked. These two decisive symptoms, in addition to the Argyll-Robertson pupil, led me to make a diagnosis of tabes, with the additional changes in the arterial blood supply. For a time the case improved greatly under treatment, but a few days ago was no better than when first seen, except that the eyes were normal. The case has developed into a typical one of tabes dorsalis, and the final result is inevitable.

The significance of eye symptoms is important to all of us. I have attempted to bring a few of them to your notice, and hope that I have succeeded in making some one point prominent enough to be of some future benefit.

A WELL-KNOWN English surgeon was imparting some clinical instructions to half a dozen students. Pausing at the bedside of a doubtful case, he said: "Now, gentlemen, do you think this is or is not a case for operation?" One by one the students made their diagnosis, and all of them answered in the negative. "Well, gentlemen, you are all wrong," said the wielder of the scalpel, "and I shall operate to-morrow." "No, you won't," said the patient, as he rose in his bed, "six to one is a good majority; gimme my clothes."

CORRESPONDENCE.

METAPHYSICS AND METEMPIRICS.

To the Editor of the MEDICAL AGE:

The sincerity of the various writers in the arguments presented against Christian Science in your columns of May 25 is not questioned, and from a material point of view they would be considered logical and fair.

It was, however, my experience to oppose at one time this new yet old religion from the standpoints advanced; but having had my seemingly well fortified positions taken, and my guns spiked, I would like to speak from my present understanding.

The first and perhaps the greatest error into which the opponents of Christian Science fall is in starting theoretically wrong. Christian Science first, last, and all the time springs and operates solely fron a spiritual basis. To evolve a material result from a spiritual hypothesis is no more possible than to mix oil and water, yet this is precisely what is attempted by those who feel called upon to pass upon the merits of Christian Science. No one, least of all a Christian Scientist, would deny the reasoning of a studied physician along the line of medical science. But until a practical or demonstrated understanding of metaphysics is reached by an unprejudiced study of the text-book of Christian Science—"Science and Health, with Key to the Scriptures," by Mary Baker G. Eddy—it is wise to refrain from statements concerning it which some time must prove embarrassing.

As each writer's argument in opposition to mental causation and its resulting conditions is on the same line of comparison, I will include them all under one head. First, let me say if objectors or investigators would notice that all terms used in Christian Science literature signifying Deity are invariably capitalized, much confusion would be saved them in their deductions. Christian Science starts with "Mind" as God, the only Cause and Creator and the only Intelligence of the universe; as Mrs. Eddy says, page 591, "Deity which outlines but is not outlined."

It is stated that "the great error of Christian Science is in making the part the whole." Let us see if this is true. The Bible declares that God is all in all; if this is so can there be anything greater than God (Mind) the only Creator? I would say here that Christian Science teaches that all God's creations including man are spiritual, but that the mortal senses are incapable of dis-

cerning them—that which *is* apparent, being but a faint manifestation of the real beauty and grandeur——

Now with regard to the denial that "disease is a mental trouble" because material tissues are affected, will the Professor also deny that thought, either *individual* or *universal,* along the lines of any particular disease, is the cause *primarily* of that disease. Thought engenders fear, fear brings on fever, chills, etc., and a whole train of evils involving the tissues, and the material symptoms appear.

Christian Science does not teach that disease is imaginary to the mortal. It does teach that from a metaphysical standpoint, and that alone, sickness is unreal because God is not the author of evil—all his creations being good (Gen., 1st chapter). Going further, it holds that God's power is no less able to restore man to health than to redeem the sinner. Man's birthright was "dominion over all," and it has never been revoked, but is his when he meets the conditions required.

The Professor speaks truly when he says, "To one accustomed to modern scientific (material) methods and observations the position of the Christian Scientist is impossible"—for it is like setting up his own man of straw and knocking him down. This is the reason he "can cultivate imaginary objects, kill them, stain them, and behold them, etc."

The objection to the title is unworthy of the intelligence of our critic, for he is surely too sensible to claim for medicine anything greater than the experimental stage, and yet he calls *it* science—the "combination of observation and deductions." Of what? Just this—*matter.* Science according to the authorities means knowledge. Is there then no knowledge but that of material deductions and man-made theories? The Psalmist says, "I will instruct thee and teach thee in the way which thou shalt go. I will guide thee with mine eye." On page 341-2 of the text-book we read, "In Christian Science mere opinion is valueless—proof is essential to a due estimate of the subject. Sneers at the application of the word Science to Christianity cannot prevent that being scientific which is based on a divine Principle demonstrated according to a given rule and subjected to proof." "If Christianity is not scientific and Science is not of God, then there is no invariable rule, and truth becomes an accident."

It is amusing to read that Christian Scientists are all of the half-cultured or ignorant classes, when it is well known that many of the most talented men and women of the various professions as well as many of the most successful business men of the country are among its strongest supporters.

If Professor Wenley had carefully read the Christian Science text-book he would have discovered that this Science is farther from any just classification with Buddhism and Spiritualism than any other philosophy or religion.

Professor McMurrich says: "Mrs. Eddy claims that her theories properly carried out will do away with any necessity of food." It is always right to be just, and to be just we must be accurate. Mrs. Eddy says on page 254, "God requires perfection, but not until the battle between Spirit and the flesh is fought and the victory won. To stop eating, drinking or being clothed materially before the spiritual facts of existence are gained step by step is not legitimate." It is needless to suggest a retrospective view of the advance in physical science during the past century, but will the stand be taken that there has been no like advance in spiritual science?

Christian Scientists do not claim perfection at this hour, but let us remember Christ's words, "Be ye therefore perfect even as your Father which is in Heaven is perfect," and know some time, somewhere, man must solve this problem of individual life apart from the flesh. Is it wisdom to postpone the consideration of the lesson and delay its practice?

The effort to belittle the cures in Christian Science by comparing them to those of quacks is also unworthy of our brother. Too many thoughtful members of the medical profession have testified to the efficacy of Christian Science to warrant such a charge.

Professor Pillsbury says: "Why should we except from prosecution the Christian Scientist whose nostrum is not less beneficial in its action or may be more harmful than the bread-pills of a so-called medical man." Suppose Prof. P. to be a strong believer in homeopathy, would he permit the allopath fraternity to dictate to him that his family shall have such doses of calomel and quinine as their formula prescribes? Is there any difference in the position he has assumed, than in this one? Can he show where God instructed the people of old in the compounding of drugs, or where Jesus mixed healing potions? Does he consider man-made science surpasses the word of God? Dr. Lederle, President of New York Health Department, in defense of Christian Scientists as law-abiding citizens in the matter of contagion, closed with the remark: "This is an age when only broad and liberal views should be entertained."

Very truly,

CHARLES K. SKINNER.

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EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

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EDITORIAL ARTICLES.

THE REVIVIFICATION OF THE HEART.

The importance in connection with anesthesia of familiarity with every method of reviving the flagging heart lends unusual interest to the records of achievement lately attained in this direction. The results Locke has achieved are wonderful in the extreme. His method consists of irrigating the coronary arteries with a solution of sodium chloride in the proportion of one-tenth of one per cent and chloride of calcium one hundredth of one per cent in water. To this he adds a little grape-sugar. With this solution Locke, before a medical congress in Turin, revived the heart of a guinea-pig which had been dead several hours. Another observer, Kulcabko, has done better than this, and has shown that the heart can be revived notwithstanding the onset of general rigor mortis. This same observer has taken the heart of a three-months-old child dead of bilateral pneumonia, which was taken from the body twenty hours after death. The coronary arteries were injected with Locke's solution, which had previously been warmed, and saturated with oxygen under pressure. After twenty minutes of apparently useless effort, slow but rhythmical contractions commenced, and the heart continued to pulsate for a good hour quite regularly. Kulcabko claims to have made a similar revivification in another human cadaver thirty hours after death.

A series of experiments by Velich are also interesting as tending to show the extraordinary resistance of the heart to agents that are dangerous to other viscera—for example, extreme cold. A heart which had been long immersed in snow, and which might reasonably have been supposed had lost all power of reanimation, was revived when immersed in Locke's solution. These investi-

gations have not as yet furnished any expedient for reviving the human heart in acute paralysis of the organ. Spina's experiments, however, with Locke's solution injected into an artery near the heart seem to have resulted in resuscitation several hours after apparent death. These experiments have forever silenced the old theory of the susceptibility of the heart to any intervention. The heart is shown to be the most tolerant of organs. They also substantiate the doctrine of Engelmann and Gaskell regarding the automatism of the heart itself.

In the domain of practical therapeutics adrenalin continues to furnish remarkable examples of the power to resuscitate the apparently paralyzed heart. The experiments of Crile, of Cleveland, on blood-pressure have been significant. The control of blood-pressure often means the control of life itself. In his experiments this investigator found that the effect of this remedy is to sustain the blood-pressure in all degrees of shock. By the combined use of artificial respiration and adrenalin, animals which had been apparently dead for fifteen minutes were resuscitated.

EDITORIAL NOTES.

Diplomas not Necessary for Admission to Medical Corps of Army and Navy.

A recent inquiry has revealed the fact that no diploma is required of candidates who wish to enter the medical corps of the army and navy. The examinations are so rigid that there is no possible chance of any one passing who has not studied medicine for a number of years. This is a suggestion that might be copied with profit by the various State medical examining boards. Any one with sufficient attainments in medicine who can pass the required examinations ought to be given a license to practice, whether he be a medical graduate or not. It would be far better to grant licenses to such individuals than to accept the diplomas of certain inferior medical colleges.

The Contract Surgeon.

A recent issue of the *Journal of the Association of Military Surgeons* contains an article from the pen of Dr. Azel Ames, late brigade surgeon United States Volunteers, in which he sets forth

at some length the injustices suffered by contract surgeons. Dr. Ames says that the contract surgeon's position has failed of betterment on account of "persistent official opposition." The fact that the contract surgeon at present is deprived of power of command even over enlisted men of the hospital corps, his uniform revealing no badge whatever of official rank, must in the opinion of Dr. Ames be repugnant to every medical man. He is essentially nothing but a hired man, who can be dropped at any time and at any place. The remedy suggested by the writer is "commissioned rank." This opinion will be heartily concurred with by every civilian medical man, but it is doubtful if its attainment will ever be possible unless physicians refuse to give their services to the government in its time of need.

A New Departure in the Conduct of Medical Congresses.

At the next meeting of the International Congress of Ophthalmology, which will be held at Lucerne in September, 1904, a new departure will be made in the conduct of the sessions. It is announced that all papers to be presented by the Congress must be in the hands of the secretary by May 1, 1904. These papers will then be printed and a copy sent to each member a month or so previous to the opening of the Congress. The papers will not be read at the sessions, but members must be ready to discuss them when their titles are announced. This method is one that ought to be adopted in all medical meetings. Much time would be saved, and instead of listening to the dreary droning of some one reading a long paper, the time could be used with profit to all by discussions.

The Day for Suicide.

A Yale professor who has been compiling the data of suicide finds that Monday is the favorite day for committing this act. Saturday is the day the fewest suicides take place. Monday is the day when the majority of people take up their troubles again after a day of rest. Females prefer Sunday for suicide, and religious excitement may be supposed to influence their action. Suicides arising out of domestic troubles mostly occur on Sunday, the day both parties are at home together.

ITEMS AND NOTES.

THE Prussian government has issued an antialcohol circular, similar to the one on tuberculosis, for wide-spread, gratuitous circulation.

IT is reported that over 300 cases of typhoid fever have occurred in Denver owing to carelessness in the use of the city water-supply.

INDICTMENTS against three retail dealers were recently returned by the Philadelphia grand jury on the charge of selling toy pistols to minors.

BOTH the plague and cholera are raging at Peitang, a seaport fifty miles east of Tien-Tsin, where 2000 deaths have occurred during the past two months.

THE Conference of State and Provincial Boards of Health of North America met in Baltimore, October 23 and 24, 1903, with headquarters at "The Stafford."

A SERIOUS epidemic of typhoid fever is reported to be prevailing among the troops in Algeria, and the military maneuvers which were in progress have been suspended.

THE chemists in the Paris municipal laboratories have shown that tomato jelly is adulterated with turnips, and powdered pepper contains a large mixture of powdered hardtack.

THERE were on January 1, 1903, 22,138 lunatics in the district, criminal, and private lunatic asylums in Ireland. These figures show an increase during the year 1902 of 508.

A HANDSOME portrait bust and bas-relief have been erected at the French watering-place of Lamalou-les-Bains to the memory of Charcot. The bronze bust is the work of Madame Charcot.

THE death-rate of Chicago infants less than one year of age has decreased 60.1 per cent since 1891; the death-rate of persons of all ages has decreased 39.2 per cent in the same twelve years.

THE rate of increase of the population of London is diminishing, having been only 16.8 per cent in the 10 years 1891-1901, a smaller percentage of increase than has ever previously been recorded.

Some cases of bubonic plague have been discovered at Campos, State of Rio de Janeiro. Campos is a town and railroad station on the right bank of the Rio Parahjba, 137 miles from Rio de Janeiro.

It is stated that J. Ogden Armour will found a professorship in orthopedic surgery in St. Joseph's Hospital, Omaha, Neb. The endowment will be $100,000, and the holder of the professorship will receive $5000 per annum.

An anticigarette league has been formed in Washington for the purpose of presenting to Congress a monster petition urging the passage of a stringent law to prevent minors from using cigarettes or tobacco in any other form.

The thirty-first annual session of the American Public Health Association was held in Washington, D. C., from October 26 to October 30. This association represents the health authorities in the United States, Canada, Cuba, and Mexico.

J. Stanley Grimes, prominent in the early investigations of hypnotism in the middle of the nineteenth century, and for a time professor of medical jurisprudence in the Castleton (Vermont) Medical College, died at Evanston recently, aged ninety-six.

The thirteenth Italian congress of internal medicine met at Padua, October 29. The questions discussed were "Individuality in Pathogenesis and Etiology of Disease," "Immunity in Acute Infectious Diseases," and "Interruption of Pregnancy in Internal Diseases."

The homeopathic practitioners of Germany recently presented a petition to the government asking that a chair of homeopathic therapeutics be established at the University of Tübingen. Strong opposition to the measure arose, and the government refused to sanction the foundation of the chair.

The government of a Caucasian province in which typhoid fever is endemic has insured the lives of all physicians in the district against the fever. The fourteen physicians are insured for more than $5000 each, two students for half this sum, and twenty-one health officers for about $2000 each.

It is stated that Dr. Finsen, the Dutch scientist, who discovered and showed the value of the light which has been named in his honor, and who has spent years demonstrating its therapeutic value, is now in poor health, and has for this reason been compelled to give up much of his work in original research.

Railroads throughout the country are waging war against the use of intoxicating liquors and tobacco by employees who are engaged in operating the lines. The fiat has gone forth generally that employees who drink or frequent places where liquors are sold are not safe to intrust with the lives of patrons, or with the valuable property transported by the railroads.

The table class of Dr. Wiley, chief of the bureau of Chemistry of the Agricultural Department, composed of twelve young men, selected for the purpose of testing the effect of salicylic acid and other preservatives upon food, began the second experiment of the series. The experiment will continue for eight months, during which time the men will be boarded at the expense of the government.

Dr. J. W. Blankenship, botanist at the State experiment stations at Bozeman, Mont., is making a collection of the herbs used by Indians for medicinal purposes; the collection will be exhibited at St. Louis. Dr. Blankenship has unearthed the formula for breadmaking from sunflower seeds used by some of the tribes, and also the nature of the wild tobacco they used to grow, which was milder than that now in use.

Despite the fact that millions are being spent on "new law" tenement houses, there are in Greater New York over 350,000 dark rooms without any windows opening to the outer air or even to another room which itself has windows opening to the outer air. Moreover, these rooms are located in over 40,000 different tenement houses scattered throughout the different boroughs. Under the law a large window, three feet by five feet, must be cut into each such room. A special and systematic examination of cellar living rooms in tenement houses is to be made, so that those which do not conform to the law may be vacated.

The detachment of twenty privates of the hospital corps of the army who are to assist Professor Chittenden, of Yale College, in his series of food experiments, have, according to an exchange, left Fort Meyer, Va., for New Haven, where they will be quartered in a house in the university grounds, and will be under the military command of Lieutenant Dewitt, an assistant surgeon in the army. Professor Chittenden believes that the average man eats entirely too much, and that by proper mastication and by gradually getting the stomach and body in proper shape, the amount of food necessary for the support of a man can be reduced more than one-half.

The Prussian minister of public instruction has notified the faculties of the universities, says the *Journal of the American Medical Association,* that steps must be taken to warn the students against the dangers of venereal disease to health and morals. He suggests as the most appropriate means short public lectures for the students in all departments of the universities, the lectures to be from the faculties of medicine, philosophy, and theology. These faculties are bidden to organize such courses at their earliest convenience. Our medical exchanges remark that the coöperation of the theologians might be dispensed with, as the students know well enough the ethical side of the matter, but choose to disregard it. The extent of the peril to health, however, is not known to most of them, and in this they need enlightenment.

An inquiry by Dr. Alfred Wolff into the mysterious cause of cancer has yielded an unexpected conclusion, which promises temperance advocates a new and powerful argument. Taking the widest possible survey of cancer areas throughout Europe and in the United States, Dr. Wolff discovers, says *American Medicine,* that all the districts of high cancer mortality are districts in which beer or cider is largely drunk. Bavaria, for instance, heads the list in Germany, and Salzburg in Austria—both great beer-drinking provinces. In France the statistics are still more striking. There is the most marked contrast between the high cancer mortality in beer-drinking departments and the low death-rate from cancer elsewhere. The increase in cancer in England during recent years, Dr. Wolff thinks, has probably a direct relation to the increased consumption of beer.

There is a source of infection from typhoid germs, the existence of which has been the cause of much speculation in the medical world, and that is the ice placed on the market. Two years ago that problem was supposed to have been disposed of satisfactorily, favorable to the public ice supplies, since the best authorities agreed that there was no danger of infection from ice after a certain period. That theory has been disproved, apparently, by recent discoveries in the St. Lawrence State Hospital at Ogdensburg, N. Y. The general impression has been that the keeping of bacteria at a temperature below the freezing point for a long period eventually led to their death, but for some years it has been conceded that the freezing did not kill but only rendered the germs for the time incapable of multiplication. Sedgwick, Winslow, and Park in the course of their investigation of the ice supplies of Boston came to the conclusion that the typhoid germs in

the ice taken from contaminated water became harmless after a month, or even less, and it was supposed that ice three weeks old is sanitarily as safe as well-filtered water.

Prof. v. Behring, says the *Medical Record,* read a paper at the meeting of German naturalists and physicians at Cassel on September 25 in which he attacked the view advocated by the Institute for Contagious Disease in Berlin that bovine tuberculosis is not transmissible to human beings. On the contrary, he agreed with those who think that milk from tuberculous cows is the chief cause of consumption in infants. The digestive organs of the infant, he said, like those of the young of all animals, lack the digestive apparatus and protective tissues which in adults prevent the entrance of infectious bacilli, the mucous membrane of an infant being like a porous filter. He said that he had found inoculations successful in preventing tuberculosis in cattle, and he based on these experiments the hope of being similarly successful in protecting human life, though he referred to the matter with the greatest caution, saying that his experiments were still incomplete, and that he did not wish to arouse hopes which might never be realized. His theory is that when cows have been successfully inoculated, certain immunizing substances appear in the milk, and these can be transferred to human beings as an antiserum.

At a recent meeting of the Nationalist Congress at Cassel, Dr. Moritz, of Alsberg, speaking on inherited degeneracy through social influences, asserted, according to the *Medical Record,* that physical degeneracy in European countries is becoming more and more evident, as marked by a decrease of physical resistance and a tendency to illness and weakness. Alcoholism he declared the chief cause of inherited degeneracy, to cure which alcoholism must be wiped out. He borrowed an idea of the members of some of our State legislatures in the suggestion that a legal certificate of health should be required before a person is allowed to marry. This is the way it appears to one journalist: Drink water and get typhoid fever. Drink milk and get tuberculosis. Drink whiskey and get the jim-jams. Eat soup and get Bright's disease. Eat meat and encourage apoplexy. Eat oysters and acquire toxemia. Eat vegetables and weaken the system. Eat dessert and take the paresis. Smoke cigarettes and die early. Smoke cigars and get catarrh. Drink coffee and obtain nervous prostration. Drink wine and get the gout. In order to be entirely well one must eat nothing, drink nothing, smoke nothing, and even before breathing one should make sure that the air has been properly sterilized.

NEW PUBLICATIONS.

FUNCTIONAL DIAGNOSIS OF KIDNEY DISEASE.

The authors of this little book have been actuated by a desire to find some method of determining the physiological integrity of the kidney with a view to the prevention of the bad results which so frequently follow renal surgical operations through anuria or kindred troubles. They supply the reader with a statement of modern methods used in the estimation of renal sufficiency. The cryoscopic methods and the calculation of the molecular concentration of the blood, as well as of the use of the phloridzin test, will be matters with which the profession may with advantage make itself more generally familiar.

Functional Diagnosis of Kidney Disease. With Especial Reference to Renal Surgery. By Leopold Casper and Paul F. Richter. Price, $1.50. Philadelphia: P. Blakiston's Son & Co.

HYDROTHERAPY.

A new edition of Dr. Baruch's well known manual on hydrotherapy may be accepted as an indication of the growing popularity of the methods the author advocates. There can be no doubt that if water therapeutics are to be applied, this should only be done in a precise and methodical way. Typhoid fever claims the largest share of the author's clinical chapters, but the rationale of the procedures advocated in numerous conditions is carefully elucidated. This work is *par excellence* the authority on hydrotherapy.

The Principles and Practice of Hydrotherapy. A Guide to the Application of Water in Disease. By Simon Baruch, M.D. Second Edition. New York: William Wood & Co.

PRACTICAL MEDICINE SERIES.

In the last two numbers of the Practical Medicine Series the departments of Skin and Venereal Diseases, Nervous and Mental Diseases, Physiology, Bacteriology, and Pathology receive treatment. The abstracts are made with the usual care and intelligence, and the new numbers can only add additional value to the reputation already achieved by this useful series of handbooks.

The Practical Medicine Series of Year-books. Vol. IX and Vol. X. Price, $1.25 per number, or $7.50 the series of ten. Chicago: The Year-book Publishers.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Appendicitis from the Standpoint of the Gynecologist.

Henry P. Newman (*Journal of the American Medical Association,* Oct. 10, 1903) says that the abdomen should be examined in all important pelvic cases, and vice versa. Functional disturbance in the pelvis may produce disturbance in the neighboring abdominal viscera.

In opening the abdomen for pelvic disease the appendix should always be examined.

If catarrhal, adherent, or containing concretions, it should be removed.

It is not sufficient to break up or separate adhesions of an attached appendix.

As the macroscopic examination of the appendix is not always conclusive, its removal or "prophylactic appendectomy," when the abdomen is already open, should be determined by the best judgment of the surgeon and the condition of the patient in each individual case.

Any appendiceal or localized peritonitis may be an active factor in the immediate or remote production of intestinal obstruction. Strangulated intra-abdominal hernia has occurred as a result forty years after the primary lesion, and with entire freedom from symptoms during the long interim.

In opening the abdomen for intestinal obstruction the appendix and pelvic viscera should be looked to for the cause of trouble.

In removal of the appendix the invaginating operation should be done, or such other painstaking work as all intraperitoneal affections demand, to protect the wounded surface from subsequent adhesions.

The frequency of implication of the appendix by contact with diseased pelvic genital organs (Kelly cites twenty-seven adherent appendices in one hundred hystero-salpingo-oöphorectomies, and the figures of Peterson correspond) renders important not only the early removal of pus tubes, infected cystic tumors, and the like, but also, after operations where the appendix remains, its careful protection from any possible denuded peritoneal surfaces

or involved areas. Barring the greater liability of infection from neighboring viscera and the somewhat greater difficulty of differential diagnosis in the female, we have more available means of exploration, a better prognosis, and greater facilities for operative and non-operative relief.

An Operation for Ptosis.

The following operation was devised and performed by H. C. Ensor (*British Medical Journal,* Sept. 26, 1903) on a case of complete unilateral ptosis. The patient was a girl, aged nine years. The eyebrow was shaved and slightly raised, and an incision was made down to the periosteum covering the supraorbital ridge from the internal to the external angular process. A second incision was made through the skin only from the extremities of the former incision and below it, so that a portion of the skin, about 5 millimeters broad at the inner side and 7 millimeters at the outer side, could be removed with the scissors, as here the skin was more abundant, and the occipito-frontalis did not act so powerfully. Paquelin's cautery was then applied to burn the tissues at the upper part of the wound, thus charring the tissues to the bone along its whole extent; the orbicularis palpebrarum was also burnt so as to weaken the muscle. The wound was then dressed and allowed to granulate, and it healed in three weeks.

In order to produce a little more effect the operation was practically repeated later on, and the result was excellent. This operation secured the following results:

1. The appearance is far more symmetrical than when one eyebrow was much higher than the other.

2. The hiding of the scar by placing it immediately below the hair of the eyebrow.

3. The formation of a fixed groove under the eyebrow instead of the appearance of vertical bands produced by the constant action of the occipito-frontalis muscle.

The Gradual Surgical Occlusion of Large Arteries.

D. Stratton (*British Medical Journal,* Oct. 3, 1903) holds that the dangerous results which attend the ordinary methods of ligation of the largest arteries call for improvement. While in a large proportion of individuals abrupt surgical closure of large arteries is unattended with alarming symptoms, yet in some patients the same procedure causes grave dangers. These dangers

are convulsions or paralysis after ligation of the carotid, and gangrene after ligation of the other arteries—such, for instance, as the iliac, femoral, and subclavian, which are less closely associated with the vital organs and processes. These effects are in large part, if not entirely, due to the suddenness of the arterial closure. It is a question yet to be clinically decided whether the collateral circulation in cases of surgical closure would be more surely established if the arterial occlusion were gradually accomplished than it is by the present abrupt method. The author gives the results of experiments made to test the practicability of gradual occlusion with an instrument operating on the principle of the ecraseur. These experiments, made on the abdominal aorta of the dog, demonstrate, it is asserted, the fact that, at least in dogs, a large artery can be gradually constricted without undue violence to its walls. Further investigation, the author states, is required to note the effect of gradual and partial occlusion carried on for prolonged periods. Gradual surgical occlusion of arteries, if found applicable in surgical practice, would seem to have its most pronounced opportunity for usefulness in the relief of aneurism, the natural and surgical cure of this disease being best brought about by the gradual deposition of the coagulum within the sac. The suggested method, it is thought, might prove serviceable in cases in which closure of the abdominal aorta is indicated.

Operative Treatment of Tic-douloureux.

Poirier (*Bull. et Mem. de la Soc. de Chir.*, No. 26, 1903; *British Medical Journal*, Sept. 26, 1903) reports a case of severe facial neuralgia in a man aged fifty-three, in which he, holding in reserve the difficult and delicate operation of removal of the Gasserian ganglion, performed resection of the superior sympathetic ganglion of the neck on the affected side. This comparatively safe and simple operation has, it is stated, been followed in this case by very satisfactory results; the patient, who previously threatened to put an end to his sufferings by suicide, having been so much relieved as now really to enjoy life. Poirier, however, hesitates to speak of a durable cure, as but a brief interval of six months has transpired since the date of operation.

In the course of a discussion of this report Delbet alluded to a case under his own care in which between two and three years ago he resected the Gasserian ganglion for tic-douloureux. At first the results of the operation in this instance were perfect, but after

an interval of about six months the pains returned, and in course of time progressively increased in intensity, and soon became as severe as they had been before the operation. Resection of the superior cervical ganglion was then performed at the urgent request of the patient, with no good results at first, but after a brief interval with decided success, the cries of pain becoming less frequent and of shorter duration, and after a time ceasing altogether. In this, however, as in the first operation, the good results were not permanent, as the pains again returned and soon acquired their former violence and intensity.

MEDICINE.

Acute Obstruction of the Intestines by Ascaris Lumbricoides.

Schulhof (*Münchener klin. Wochenschrift,* No. 24, 1903) reports a case of a woman forty-seven years old suffering from severe abdominal pains, vomiting, and retention of feces; the abdomen was tense and painful to palpation, there was lively peristalsis, and the pulse was 100. High enemas were without results. A laparotomy was performed, and the following conditions were found: The larger portion of the intestines was collapsed, the small intestines containing hard masses; the colon was distended; the gall-bladder was thickened, enlarged, and adherent to the lower lobe of the liver. Carcinoma of the latter was diagnosed, and the abdominal incision was closed. During the final suturing vomiting set in, and two ascarides were ejected; on the following day three more were vomited. In the evening there was a passage of gas, with a stool containing ascarides, after which the bowels moved normally. In all there were twenty-two worms passed, evidently due to the manipulation of the intestines during the operation. Santonin was then administered to the patient, with the result of the expulsion of the remaining worms.

Special Aids in the Early Recognition of Pulmonary Tuberculosis.

W. L. Dunn (*American Medicine*, Oct. 17, 1903) says that the full appreciation of the value of percussion and auscultation findings and symptoms is dependent upon the recognition of the limitations of the significance of their presence or absence. De-

ductions from temperature may be made from only frequent, regular observations.

An auscultation chart made while listening to the sounds is an essential aid to accuracy of both observation and record.

Negative sputum findings are never sufficient ground for negative diagnosis.

Blood examinations throw no light upon diagnosis of tuberculosis in its incipiency, except in excluding those conditions in which the blood findings are characteristic.

Significance and reliability of agglutinations are not yet fully established.

The tuberculin test is a safe, reliable, practical, and justifiable diagnostic resource in those cases in which its use is indicated; that is, in those cases of suspected early tuberculosis in which all other means have failed to clear up the diagnosis. When a positive diagnosis can be made without the tuberculin test, its use is to be condemned as a meddlesome procedure.

The Pathology of Acute Rheumatism and Allied Conditions.

E. W. A. Walker and J. H. Ryffel (*British Medical Journal,* Sept. 19, 1903) have made a report of their studies on the micrococcus of acute rheumatism and its production of acid. The following provisional statement is made by them:

(1) The micrococcus rheumaticus produces formic acid in very considerable quantity, and also at least one other acid of the fatty acid series. (2) The acid (formic) is not only present in the filtered cultures of the organism, but also can be extracted from the bodies of the microörganisms themselves. The washed micrococci contain, in addition to formic acid, at least one of the higher fatty acids. (3) Ordinary streptococci, such as a streptococcus isolated from a case of erysipelas, only give rise to a small amount of formic acid. This observation may constitute a means of differentiation between the rheumatic microörganism and other members of the streptococcus group. (4) Formic acid and probably another fatty acid are present in the urine during the course of acute rheumatism in appreciable amounts. From normal urine formic acid is either altogether absent or it occurs in traces only. (5) Under the salicylic acid treatment of rheumatism, formic acid is reduced in quantity in the urine of the patient. (6) Formic acid is obtainable from the tissues of an animal (rabbit) suffering from acute arthritis due to the inoculaton of the microörganism.

Chronic Nephritis Without Albuminuria.

Arthur R. Elliott (*Medical News*, Sept. 19, 1903) says that latency of symptoms is so constant a characteristic of chronic interstitial nephritis as almost to constitute its most salient feature. Latency of symptoms does not constitute a point of absolute distinction between the early and the advanced stages, or between the mild and severe forms of the malady. Symptoms are especially liable to be absent and urinary signs uncertain during the early stages of chronic interstitial nephritis. Albumin is absent from the urine of this form of nephritis with great frequency. It may frequently be absent during the early stages. It may occasionally be absent until the disease enters the final stages. Albuminuria, therefore, constitutes a very unreliable diagnostic sign in this disease. More reliable evidence of renal change is diminution in the gross amount of urinary solids, and especially significant is the presence of casts. Chronic interstitial nephritis never exists as a clinically recognizable condition without the presence of casts in the urine. Although renal diagnosis cannot be founded on casts alone, they constitute a corroborative sign of high clinical value, when associated with other indications. The secondary circulatory changes following chronic interstitial nephritis are so constant and characteristic as to furnish, in most cases, sufficient ground for the recognition of the disease before reference is made to the urine. The diagnosis should be made, if possible, from the physical signs and symptoms, the urinary indications being regarded as corroborative rather than as essential evidence.

Eczema Cured by Measles.

G. W. Squires (*Medical Record*, Oct. 17, 1903) reports the following interesting case:

Mark D——, aged eighteen months, naturally born, and healthy at birth, at the age of ten months became sadly afflicted with facial eczema. Except for some constipation and the eruption the child seemed perfectly healthy. Various kinds of medicines within and ointments and washes without were without effect. The exudation of serum was such that at night the pillow on which the child lay would be wet, and often when the crusts formed and cracked the child's hands, sheets, and pillows would be stained with blood. At this juncture, when the parents were despairing of a cure, an older brother contracted measles at school, came home, and had a hard attack. Much alarm was felt lest the

baby should contract the measles and, with his already bad skin eruption, die. The baby in due time after exposure got very dangerously sick with the measles. He had fever and delirium, and the skin was as red as a boiled lobster. In due time convalescence set in, and what was the surprise of the physician and friends to see the eczema melt away like snow in the springtime, and every trace of the former eruption disappear, leaving the skin as soft and clean as a baby's can be. Now, after a year, there has never been the slightest symptom of a return of the facial eczema.

Proctocolitis and its Treatment.

W. M. Beach (*Medical Record,* Oct. 10, 1903) states that proctocolitis is a disease that attacks old and young. The essential symptoms are pain, constipation, and membranes. In diagnosis, appendicitis, malignant and pelvic diseases are to be eliminated. Reflex symptoms must be recognized when they occur, as neuralgia, lithemia, vertigo, dyspepsia, cardiac irritation, asthma, and neurasthenia. The history of acute dysentery of bacillary origin and the neuroarthritic diathesis must be reckoned as causal factors. Ptosis of the abdominal viscera, appendicitis, and tumors may be complications in severe cases. The diet should consist for the most part of soft foods, eliminating green vegetables, fruit, fats, and alcohol. Milk is the standard aliment. Certain medicines, such as castor oil, to secure normal action of the bowels; tincture of nux vomica in doses of two drops every three hours for anorexia; antitoxins, such as salol, bismuth salicylate, soda salicylate, and guaiacol carbonate, to relieve the reflex symptoms of autointoxication; and dilute nitric acid in ten to fifteen-drop doses for the relief of hyperchlorhydria—these are of use when indicated, but should be selected and used with great care. With the above regimen the most efficient procedure is to wash out the colon.

Treatment of Eclampsia.

J. M. Howland (*Virginia Medical Semi-Monthly,* Oct. 9, 1903) says:

1. That more care of the pregnant woman is not only desirable but possible, even in the most sparsely settled communities.

2. That toxemia of pregnancy may usually be prevented.

3. That severe toxemia of pregnancy need not in the vast majority of cases result in eclampsia if properly treated.

4. That immediate forcible dilatation of cervix and delivery of child in eclampsia occurring in a pregnant woman is not always justifiable.

5. That the early delivery of child is desirable when it can be accomplished without serious injury to the mother.

6. That the use of chloroform and morphine has probably been overdone.

7. That the use of chloral, normal salt solution, hot pack, nitroglycerin, and veratrum viride has probably been neglected or improperly administered.

8. That, other things being equal, the constant and intelligent attention of the physician during the whole period of attack (convulsions) will result in the cure of a very large percentage of cases.

The Relation of the Status Lymphaticus to Sudden Death.

The condition known as the status lymphaticus is, according to Geo. Blumer (*Johns Hopkins Hospital Bulletin*, October, 1903), a definite pathological entity. The writer says that it is probably associated with if not due to a condition of intermittent lymphotoxemia. It may be associated with sudden death, probably as a result of lymphotoxemia alone in some cases, or as a result of the action of toxic, physical, or psychic injuries, which are rendered much more powerful than usual by the predisposing action of the lymphotoxemia.

In some cases the sudden death is undoubtedly mechanical and due to asphyxia from pressure of the enlarged thymus on the trachea.

The subjects of the status lymphaticus can be recognized clinically in some instances.

The Circulation of Tissue Fluid in Man.

Geo. Oliver (*Lancet*, Oct. 30, 1903) has made a number of observations in regard to this subject, and says that the amount of tissue lymph varies at different times in the course of the day, and each variation is of short duration.

The ingestion of food produces a rapid flow of lymph into the tissue spaces, which in an hour after meals acquires its maximum development and then slowly subsides, and only ceases to be apparent after the lapse of from three to four hours.

The digestive curve of variation always follows the same general type, the rise being rapid, the acme short, and the subsidence somewhat gradual. The curve of variation is therefore rhythmical, recurring after each meal with perfect regularity.

Oxyuris Vermicularis.

Heller (*Deutsche Archiv für Innere Med.*, Bd. 77, 1903) describes the life cycle of the oxyuris as follows: After ingestion of food containing the eggs into the stomach, where they are hatched, they are then transferred into the intestine and there attain maturity. The females become impregnated in the cæcum and appendix, and from thence wander into the large intestine, where they deposit their ova in the feces and intestinal mucus. From the beginning of infection until complete maturity a period of five weeks elapses. In order to eliminate the young brood from the small intestines calomel should be first administered, to be followed later by santonin, as the convolution of the intestine protects the worm from simple vermifuges. To remove the adult female from the colon one to three liters of a .2 to .5 soap solution should be introduced as a high enema, the patient being in the knee-chest position; this should be repeated after eight days.

Blood-pressure in Peritonitis.

J. B. Briggs (*Boston Medical and Surgical Journal,* Sept. 24, 1903) says that patients with general or rapidly spreading peritonitis have constantly, at least in the early period, abnormally high blood-pressures; that in perforative peritonitis a sharp rise in blood-pressure may precede the onset of other symptoms; that in doubtful cases, where perforative peritonitis is suspected, and the general previous blood-pressure level is known, the course of the blood-pressure after the onset of grave symptoms should receive consideration in determining the propriety of operation.

Early Diagnosis of Diaphragmatic Pleurisy.

Stenitson (*Wiener klin. Wochenschrift,* No. 16, 1903) calls attention to the symptoms of pain, disturbance of the movement of the diaphragm, and abdominal reflex. The seat of pain is in the lower thorax and radiates into the epigastrium, hypochondrium, scrobiculus cordis, back, and shoulder. Regarding the second symptom there is an elevation of the diaphragm with

retarded breathing of the affected side. The third symptom is produced by reflex contractions on inspiration of the rectus abdominis muscle, which may also be produced by pressure on the intercostal spaces.

Tendon Reflexes in Nephritis.

Lion (*Deutsche Zeit. für Med.,* No. 30) found in cases of nephritis uncomplicated with fever, in threatened uremia, an increase of the patellar reflexes. In contracted kidney with good diuresis the reflex is normal. On improvement of cases the increased reflex is reduced. In nephritis with fever the exaggeration of the reflex is rare. Out of 262 cases, only in five was a diminution of the reflex observed. The author considers the exaggerated reflexes in nephritis as due to irritation caused by the retention of the products of metabolism.

THERAPEUTICS.

The Dietetic Treatment of Chronic Nephritis.

At the recent meeting of the Medical Society of Pennsylvania, J. M. Anders (reported in *Medical Record,* Oct. 10, 1903) presented this paper.

He stated that the dietary that fails to meet the requirements of nutrition plus the loss of albumin is inadequate. Efforts to lessen the degree of albuminuria at the expense of the quality of the blood and general nutrition are not so much blessings as evils. By means of a proper diet it is possible to postpone, if not at times prevent, the later development of true contracted kidney. It is not possible to formulate a dietary suitable to all individual cases. Indications also vary with the stage of the morbid process. In his experience the long-continued restriction of the diet to milk alone produced an undue general weakness. In advanced cases of granular kidney active heart disease is a constant concomitant, and the integrity of the cardiovascular system must be preserved. He expressed the view that clinicians manifest a general tendency to supply the system with an insufficient amount of albuminous aliment, in view of the constant systemic drain, and pointed out that the proteids form the essential basis of all tissues, and that perfect metabolism cannot be accomplished without a certain definite quantity of nitrogen. He is of the opinion that red meats show as good nitrogen-excretion as white meats. Fats are allowa-

ble, and butter, except in cases of obesity. Whole milk should be a considerable portion of the diet, meats should be somewhat restricted, while fruits and green vegetables and rice may be given rather freely. He emphasized the fact that the normal physiological quantity of food is required, which is practically 110 to 130 grammes of fat, 2500 to 3000 grammes of water, and 18 to 30 grammes of inorganic salts. The extent to which the given diet contributes to the nutrition and development of bodily strength must be carefully estimated. This is accomplished by noting the effect upon the degree of albuminuria and also upon the kidney elimination of the normal metabolic products. The importance of carefully recording the bodily weight of the patient was emphasized.

The Dietetic Treatment of Constipation.

Henry T. Hewes (*Boston Medical and Surgical Journal,* Sept. 17, 1903) says that in the treatment of this trouble we must bear in mind two general propositions: First, the patient has either some definite pathological lesion or condition, such as obstruction of the intestine, lesion of the nerve mechanism or its function, or general disorder of metabolism; or secondly, he is living under a faulty condition of hygiene, as a result of which the natural forces of stimulants of the physiological function are lacking. In either of these cases it is important that the general hygienic treatment of the constipation be first attended to, and it is to this part of the treatment that the author devotes his attention. Experience has taught that there are three things that must be insisted upon if treatment is to be successful: (1) The habit of a regular period of defecation; (2) a proper amount of physical exercise; (3) a proper diet.

Hewes says that it is necessary to discuss only the last of these three requirements. It is first necessary to establish the amount of food and the kind needed to sustain a healthy existence. This the author fixes by the number of calories required in the twenty-four hours and the foods best adapted to furnish them. It is further necessary to consider which foods have a special action in promoting peristalsis, and how they do so. Such foods, classified according to the way they tend to produce bowel movements, are of three kinds: (*a*) Those that act by reason of non-absorption if given in excess (fats), or which contain a large amount of residue which acts mechanically (vegetables). (*b*) Those which liberate organic acids or other substances, which either locally or through absorption increase intestinal activity. In this class are

certain fruits, such as the tamarind, prune, plum. (*c*) Those which are prone to undergo fermentation in the intestine, with the formation of organic acids. This class includes the carbohydrate foods generally.

The Treatment of Delirium Tremens.

J. R. Clemens (*New York Medical Journal,* Oct. 10, 1903) outlines the general treatment as follows:

Food: Milk, raw or peptonized, every two hours, alternating with strong beef juice.

Medicinal: A dose of calomel at the onset, to be followed by an occasional saline; a bitter tonic, in which strychnine occupies a place; if the first heart sounds become weak, strychnine hypodermically.

Insomnia: The room should be dark, cool, and quiet. If insomnia is urgent a choice from the following will promote sleep: hydrobromide of hyoscine (1/200 to 1/100 grain) hypodermically; sulphonal or paraldehyde by the mouth. Opium and chloral hydrate are positively dangerous by reason of the probable condition of the kidneys and heart respectively.

Suicide: A never flagging watchfulness on the part of the nurse or nurses (if the patient is very powerful). He must be constantly under observation. All lethal instruments must be removed.

Attempts to leave bed: Moral suasion, seconded, if necessary, by passing a sheet across the patient and tying its ends together beneath the bed.

As the delirium may be secondary to the state of the lungs, treatment consists in keeping a constant ear to the heart and a finger to the pulse, exhibiting stimulants without restraint where necessary.

Where recent injury has precipitated an attack, treatment must be more adroit, and of necessity is more difficult.

The Treatment of the More Serious Syphilitic Diseases of the Eye.

A. Darier, of Paris (*British Medical Journal,* Sept. 26, 1903), says that the majority of syphilitic diseases of the eye are readily cured by ordinary mercurial treatment, but there are some malignant cases that resist treatment. No method of administration of mercury gives such exact control as that of intravenous injection, and it is far superior to subcutaneous injections, when accumula-

tion may take place. The patient and surgeon may watch for what is called the "reactional limit," which is recognized by abdominal pain, etc., and then we have arrived at the maximum dose. The method of intravenous injection of aqueous solutions of cyanide and biniodide of mercury which he recommends is to use from one-half to one centigramme of the salt, and augment the doses by degrees until some sign of colitis appears. He then reduces the dose, and again increases it until a point is reached when two or three centigrammes can be injected into the system. If improvement takes place it may be reduced, but not discontinued, until thirty or forty injections have been given. Then a month's rest is taken before a second series of injections is given. Frequently potassium iodide does more harm than good. Injections of pilocarpine are very useful aids to the action of the mercury. Prolonged treatment is necessary in many cases.

Copper in Syphilis.

A. F. Price (*Medical Record,* Oct. 10, 1903) says that the treatment of syphilis in all its stages, inclusive of the cachectic and the parasyphilitic forms, is well founded on sulphate of copper in the average dose of 1/30 grain, aided by such a quantity of blue mass as is borne readily by the patient.

In old syphilis in any form the copper salt must be given in minute doses, and gradually increased as tolerance is established until the usual dose of 1/30 grain is given, when the mercurial should be added in a rather small dose. It is sometimes better to give the medicine only on alternate days.

In acute syphilis the copper salt is to be given in the dose of 1/30 grain and the mercurial added at once, and increased as much as the patient will tolerate, in order that the disease shall be neutralized and eliminated as completely as possible.

Iodine, iron, arsenic, and tonics of any sort, while useful, occupy a subordinate place in the treatment of syphilis.

Alcohol, and especially tobacco, should be forbidden to syphilitics.

Immunization to Tuberculosis.

Neufeld (*Deutsche med. Wochenschrift,* No. 37, 1903) was able to immunize goats, asses, and cattle by means of intravenous injections of living tubercle bacilli derived from the human, so that the animals were not susceptible to virulent doses of bovine tuberculosis. Living cultures were used, as the dead bacteria will

not produce immunity. The grade of immunization was indicated by the acute toxic action of increasing doses of the living culture in the animals which had been previously treated. The dried cultures did not have the general toxic action of the living bacilli, although the local action was the same.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Should the Uterus and Ovaries be Removed in Operating for Double Pyosalpinx?

C. C. Frederick (*American Medicine,* Oct. 10, 1903) says that the history of operative procedures in this class of cases has passed through three well defined periods. The operation, as first practiced by Tait and his followers for several years, consisted in removing both the tube and ovary through the suprapubic incision, leaving the uterus. In making a pedicle common to both tube and ovary there was of necessity an incomplete removal of the tube, leaving in most cases a part of the proximal end. Many of them were cured and others not cured, the failure being in many instances due to a continuance of the diseased process in that part of the tube remaining. Some of them who had undergone this incomplete operation were again operated, the uterus was removed, and in many cases a cure resulted. The natural inference was that the uterus was the offending organ, which prevented cure after the first operation; hence rose the teaching that the uterus should be removed with the diseased tubes, in order to insure success. Then came the resort of the French school to vaginal operation for pus tubes, and then every vestige of uterus, tube, and ovary was removed, whether it was necessary or not. Learning by observation, and being obliged to treat these poor sufferers, had gradually awakened in the minds of many operators a desire to prevent such results, and gynecologists should be gratified to see a return to abdominal section, with its possibilities of conservative surgery. After an experience of about fifteen years with the various surgical procedures, and noting the effects of these operations, gynecologists were in a position to decide quite accurately the amount of pain, discomfort, and illness due to disease of the various anatomic parts of the woman's sexual apparatus. As a result of these observations and deductions it was not necessary to sacrifice all of these

organs when they were not all hopelessly diseased. In other words, gynecologists were justified in removing nothing but those organs which were distinctly diseased, and they were in duty bound to retain for the woman all that were not diseased.

The author believes it can be stated as a surgical principle which cannot be questioned that the duty of the gynecologist, when consulted by a patient for operation, is to afford that patient the greatest possible relief from the symptoms complained of, with the least mutilation, and the preservation of every organ possible to enhance the most perfect performance of all bodily functions. The rule should be to save as much healthy ovarian tissue as possible, even if it be only the fourth or eighth part of an ovary. In some rare instances the uterus should be removed, but the occasion is rare. If the condition is known to be tuberculous, the uterus should certainly be removed. But even if both tubes and uterus are taken out, one should still preserve all the ovarian tissue possible. For the past five years he has been studying the results of leaving in healthy ovaries in those cases of fibroids needing hysterectomy. The results had been very satisfactory. He is thoroughly convinced that gynecologists have no right under any circumstances to sacrifice an ovary or any part of one which is not absolutely and incurably diseased. The uterus should not be removed if it can be retained. The surgeon should not remove any more ovarian tissue than necessary, but the tubes should be removed *in toto;* by so doing the surgeon will best fulfil his duty to his patient by making her a more perfect woman physically, mentally, and physiologically.

Pelvic Diseases in Young Girls.

F. F. Lawrence (*Journal of the American Medical Association*, Oct. 17, 1903) says that all cases, whether in young girls or in old women, in which menstrual, intermenstrual, or premenstrual pain is a prominent symptom should be subjected to careful and thorough examination to determine its cause.

No leucorrhea should be permitted to pass unnoticed, or treated by such slipshod methods as ordering a douche, giving medicine, etc., without first ascertaining its cause. In all cases where discharge is purulent a microscopic examination should be made to determine presence or absence of gonococci, tubercle bacilli, or other important septic organisms.

All cases of excessive flowing, intermenstrual hemorrhage, or prolonged menstruation should be thoroughly examined.

In all cases where amenorrhea exists every effort should be made to find the cause.

In young girls subjects of neurotic symptoms which develop at puberty or occur with each menstrual epoch, a careful and thorough examination of the pelvis will often reveal the cause.

If menstrual pain, irregularity, leucorrhea, and neurotic disturbances follow the exanthemata, a pelvic examination is imperatively demanded.

In all virgins the rectobimanual examination should be made, the vaginal touch only being used when absolutely necessary.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,

Attending Neurologist to Harper Hospital.

Hereditary Factors in Epilepsy.

The *American Journal of Insanity* (July, 1903) contains an article by R. E. Doran with the above-mentioned title which summarizes as follows:

A study of heredity in the history of 1300 epileptic patients in a public institution shows:

1. Though it was impossible to secure data in many cases, yet a definite history of the various neuroses or alcoholism was found in 46.5 per cent of the total.

2. Alcoholism, epilepsy, and insanity combined were responsible for 38.6 per cent of the total cases.

3. Paternal alcoholism existed in 18 per cent of all cases.

4. Diseases other than those connected with the nervous system have little hereditary influence in epilepsy.

5. The age of onset is influenced by the character of the heredity.

The Nature and Genesis of an Insane Delusion.

J. W. Wherry, in the July number of the *American Journal of Insanity*, at the close of an article with the above title thus defines an insane delusion: "This, then, is an insane delusion: an idea born in subconscious cerebration; projected into consciousness in times of stress; believed implicitly and strenuously defended by the originator, but which no one else will accept as true."

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ORIGINAL CONTRIBUTIONS.

PROGRESS IN LARYNGOLOGY.

BY B. A. WADDINGTON, M.D., SALEM, NEW JERSEY.

From the standpoint of the general practitioner one of the most important recent advances in laryngology is the use of adrenalin hydrochloride for the prevention of hemorrhage from the upper respiratory tract. Under favorable circumstances practically bloodless operations may be done within the nose by spraying the parts, previous to the operation, with a 1-to-1000 solution of this substance, and the operation hence greatly facilitated. For example, one of the chief impediments to the speedy removal of a number of nasal polypi with a snare is nasal hemorrhage, which after the removal of the first polypus coats everything within the interior of the nose with blood and renders the polypi indistinguishable from the normal structures. By first cocainizing the nasal chambers and then spraying the polypi with a 1-to-1000 solution of adrenalin hydrochloride, so little bleeding occurs that the polypi can readily be differentiated from each other and the surrounding structures, and removed one after the other with the utmost facility. Sometimes not more than one or two drops of blood will be lost as the result of the removal by the snare of six or eight nasal polypi, and should this small amount of blood at any stage of the operation obstruct the view, it is readily removed by means of absorbent cotton.

For a bloodless operation within the nose the field of operation is best prepared in the following manner: Pledgets of absorbent cotton are saturated with a three-per-cent solution of cocaine, which with forceps are placed within the nose in contact with the parts to be operated upon and allowed to remain at least half an hour. By employing a weak solution of cocaine which remains in contact with the parts for a considerable time more *profound* and

deeper anesthesia of the tissues is finally obtained than if stronger solutions were used; because when strong solutions are used the capillaries contract and the tissues shrink, after which absorption goes on more slowly than if a weaker solution were used.

After the parts have been anesthetized by cocaine they are sprayed with adrenalin solution. This substance is sold by the pharmacists in 1-to-1000 solution, but is active in the strength of 1 to 20,000. However, for important operations it is best employed full strength or 1 to 1000, as it is said to be absolutely non-toxic, and there is no danger of poisoning from the use of large quantities.

As the result of spraying with adrenalin solution the intranasal tissues, already blanched and shrunken from the use of the cocaine, are still further shrunken and appear more white and bloodless than the skin. The capillaries contain so little blood that they may be severed without hemorrhage. Large exostoses or ecchondromata may sometimes be removed by means of the saw with practically no hemorrhage. This, however, is not always possible, because adrenalin exerts its effect mainly upon the capillaries and has comparatively little effect upon the larger vessels; so that if in sawing through bone or cartilage a comparatively large artery is severed the artery will bleed and spurt practically the same as if no adrenalin had been used.

Adrenalin solutions cannot advantageously be employed to control nasal hemorrhage, because the presence of blood washes away the solution when sprayed into the nose and prevents its coming into direct contact with bleeding mucous membrane. Nasal hemorrhage is probably most readily controlled by the use of peroxide of hydrogen in the manner described by Gleason, of Philadelphia. A piece of absorbent cotton is wrapped very loosely about a probe so as to form a cone about three inches in length. Its distal extremity is about half an inch in diameter and its proximal extremity about an inch and a half in diameter, the cotton being wrapped so loosely about the probe that it can be readily compressed sufficiently to enter the nasal chambers. Such a mass of cotton will take up about half an ounce of peroxide, and should be inserted dripping with peroxide into the bleeding nostrils until its small extremity closes the posterior nares. Immediately the blood within the nose clots, and the clot swells to an enormous size, while much gas escapes from the nostril. After the insertion of the cone of cotton within the nose, a finger-tip of the left hand is placed against the cotton to steady it and the probe is withdrawn, leaving the cotton in position. If necessary one or two

more pledgets of cotton saturated with peroxide are placed within the nostrils to make additional pressure. Under such circumstances as this the blood penetrates the fibers of the cotton; it is clotted by the peroxide, and the clot quickly becomes large enough to exert sufficient pressure to control the hemorrhage. The more severe the hemorrhage the more quickly it is controlled!

Because solutions of adrenalin blanch and shrink the intranasal mucous membrane, it was hoped that this substance used locally would prove an effective remedy for hay-fever. However, this expectation has not been fully realized, because of the reaction that follows its use, the blood-vessels becoming more dilated than before within an hour or two after its employment. For this reason secondary hemorrhages after nasal operations are more common after the use of adrenalin than if it were not employed. The substance also is distinctly irritating, and if used at all in hay-fever should be employed only in dilute solutions 1 to 20,000, used as a spray, or placed in contact with the nasal mucous membrane by means of absorbent cotton. Used in this way it oftentimes gives satisfactory results without disagreeable after-effects. It can be used as often as every hour or two.

However, the most important advance made in the treatment of hay-fever is that described by Bishop, of Chicago, who pointed out the connection of hay-fever with the uric acid diathesis. Bishop prepares his patients for the hay-fever season by the administration of alkalies. If in spite of his preparatory treatment an attack occurs, he prescribes either dilute sulphuric acid or Horsford's acid phosphate, a teaspoonful well diluted after meals and at bedtime.

Gleason, because of the action of nitromuriatic acid upon the liver, advises during the attack three to five drops of concentrated nitromuriatic acid in a tumbler of water. According to Bishop the attack of hay-fever is the result of an excess of uric acid in the blood, which irritates the mucous membrane of the nose, eyes, and trachea. The exhibition of an acid renders the blood sufficiently acid to prevent the absorption of uric acid.

Gleason ascribes the attack not only to the presence of urates in excess, but notes that the urine of hay-fever patients is often loaded with crystals of oxalate of lime, and attributes some of the good results following the use of nitromuriatic acid to its preventing the formation of this salt.

Whatever may be said concerning the theories or the cause of hay-fever, it may often be aborted within forty-eight hours by three to five drops of concentrated nitromuriatic acid after meals

and at bedtime in a tumblerful of water. The remedy, however, is only effective in a somewhat small proportion of cases, but if successful will show its good effects within one or two days. To prove effective the acid must be used during the entire hay-fever season, and the patient will feel the bad effects of omitting a single dose of the remedy. For example, should the evening dose be omitted the patient will probably have some of the symptoms of hay-fever the next morning. The acid treatment continued through two or three hay-fever seasons has in many instances resulted in a permanent cure.

Until within the past five or six years operations for the correction of deviations of the nasal septum were notoriously unsuccessful. At the present time we have three methods of operation yielding almost uniformly successful results—those of Asch, Gleason, and Kyle. In order to understand these operations it must be borne in mind that the entire nasal septum is never deflected, and therefore it is more proper to speak of a deflected area of the nasal septum. Asch, by means of special instruments, makes a crucial incision through the deflected area of the septum. The four triangular flaps are then thoroughly bent beyond the median line, and retained in the median line by means of tubes in each naris which are worn for some time, that in the formerly obstructed naris being worn until healing is complete. Gleason makes a saw cut from below, up about the entire deviated area, and then bends the quadrilated flap consisting of the entire deflected area beyond the median line. He endeavors to fracture the bone in the neck of this flap, if bone be present, or to so thoroughly bend the cartilage that its resiliencey is destroyed until healing is complete. This can be accomplished in rather more than eighty per cent of the cases, so that no tube or other means of support is required during the healing process. Gleason claims as an advantage of his method over that of Asch that there is only one flap to bend, and that is so situated that the neck of the flap generally contains bone which can be broken, so that the resiliency of the septum is entirely destroyed and there is no tendency for the deformity to be reproduced. He also states that the larger proportion of cases of septal deviation are the result of traumatism, and that his U-shaped saw cut practically reproduces the original traumatism, so that it is really the same as if one were setting a recent case of dislocation and fracture of the anterior part of the septum. The Asch operation is done under ether narcosis, that of Gleason under cocaine anesthesia. Both operations are popular both in America and in Europe.

Recently Kyle, of Philadelphia, has devised an operation which consists in the removal of wedge-shaped masses from the deflected area by means of a special instrument devised by Fiterof, resembling a short, three-cornered file. An incision by means of this instrument is made below the deflected area upon the concave side of the septum. It will be seen, as a result of the triangular shape of these parallel incisions, that when the septum is brought into the median line redundancy of the septum has been removed, and that the triangular cuts become simple, straight incisions. Kyle modifies his method of operation when the nose is twisted to one side by making an incision through the skin of the bulge of the nose sufficiently large to enable him to introduce Fiterof's file into the nares, so that a perpendicular wedge of bone and cartilage can be filed out of the septum at its convexity. When the nose is turned into the median line of the face this V-shaped incision is brought together. During the healing process the parts are retained in position by means of a tube worn within the nose.

DISINFECTION AND ASEPTICISM IN THE OFFICE OF THE GENERAL PRACTITIONER.

BY EDWARD HORNIBROOK, M.D., CHEROKEE, IOWA.

The recent graduate has received such thorough training in the principles of aseptic surgery that what I say in this paper may seem to him like supererogation, or "carrying coals to Newcastle." The busy general practitioner who attends infectious diseases, does midwifery, some minor gynecology, and a little surgery, must be ever on the alert to escape the disasters that may result from a disregard of asepticism, and the disinfection of his person, his clothing, and his office. If "perpetual vigilance is the price of liberty," much more is perpetual vigilance the price which each of us must pay to keep our offices and persons from communicating diseases as well as surgical infection.

Perhaps I can convey my ideas of the risks which we all incur by giving the details of a single day's work in my own practice. On the 29th of January last I was called to a case of phlegmonous erysipelas before office hours. The temperature was 104°. My clinical thermometer is disinfected in 1-to-1000 alcoholic sublimate solution and rinsed with water before putting it back in case. I require to make multiple incisions. My knife is sterilized by running it through the flame of a match. I would have preferred a spirit lamp, but I have none with me and have not time

to waste in boiling water. I see a derisive smile on the face of the gentleman I met in consultation; and he explains, on being questioned, that the case is already septic, and therefore antiseptic precautions are entirely unnecessary. I silence him by asking if he ever heard of a mixed infection. I use the water which I had put on to boil to disinfect my scalpel before replacing it in my pocket case. Care is taken to keep my hands out of the pus and blood which escapes from the wound, and to thoroughly scrub them with sublimate solution and green soap before I touch the instruments, which are now in boiling water.

When I reach the office I find a case of periostitis which needs incision. Remembering the dangers of carrying erysipelas, I remove my outer garments and hang them in a closet to be fumigated with formalin vapor. My hands are disinfected, and I don a white coat and pants taken from aforesaid closet. I again cleanse my hands, this time in a sterile wash-basin, and wipe them on a sterile towel. I keep a sack of small towels and gauze sponges and use a clean one every time I wash my hands, or wash any part of the person of another. The site of the proposed incision is then thoroughly cleansed, and without waiting to boil the knife I run it through the flame of a spirit lamp several times. This knife and the one I used in the morning are then thoroughly cleansed by my office helper before being returned to their cases.

When this patient is dismissed I find a woman in the waiting-room, who is greatly amused at my white coat and summer pants. I find she has an offensive leucorrheal discharge, and before making a digital examination I use a copious vaginal douche, through a wire speculum, of two-per-cent creolin solution. I find an offensive purulent discharge oozing from the os, and conclude that I have a case of purulent endometritis to deal with. I remove the pus from the canal and mop it with creolin, full strength, before making any intra-uterine application. I do this because germs which are innocuous in the vagina and cervix are capable of setting up virulent processes when carried to the endometrium. If a pledget of cotton is placed beneath the cervix to protect the vagina, the application of creolin to the cervical canal is painless. The cotton and gauze used have been sterilized and kept in jars ready for use. The instruments are given to my office assistant to be cleansed and sterilized after every gynecological examination.

My next case is a small lipoma which requires only surgical cleanliness, which you all so well understand. While I am doing this operation three children wait for an hour in the waiting-

room. One of these proves to be a severe case of diphtheria. She is sent home, and the waiting-room is thoroughly fumigated and closed till the next morning.

This is only such a day as any of you may have in office practice; and yet every case mentioned required the closest attention to aseptic precautions, or I might have carried a chain of infection from one patient to another so that no one could foresee the results.

To be able to effectually carry out these details there are certain preliminaries which appear to me to be absolutely essential. These I shall proceed briefly to summarize:

1. There should be no carpet nor upholstered furniture in waiting-room, consulting-room, or operating-room.

2. All windows and doors should be open for at least half an hour after the sweeping and dusting in the morning before the office hours commence.

3. Wash-basins should be cleansed and a drachm of alcohol burned in each while the office is being aired. And every time a wash-basin is used it should be cleansed and alcohol burned in it before being used again.

4. There should be separate wash-basins for cleansing the hands and for surgical work.

5. Nail-brushes, throat-brushes, and camel's-hair brushes should be kept in wide-mouth jars in sublimate solution.

6. All towels, wash-rags, and gauze sponges should be sterilized and kept in sterile bags ready for use, and neither should be used more than once before returning to the laundry.

7. Gauze and bandages should be first steam sterilized and then placed in dry heat at about 400° for at least half an hour, and then kept in air-tight jars.

8. No brush or applicator should be dipped into any bottle containing the solution which is to be applied to any sore or wound. The solution should be first turned into a narrow-bottomed glass or porcelain vessel, and what is not used should be thrown away. My own method is to burn a small quantity of alcohol in these vessels before the solutions are poured into them, and again after they are used.

9. The soap to be used for washing hands or instruments should not be the ordinary cakes used for toilet purposes. It should be liquid or semiliquid, and poured upon the hands as required. It seems absurd to expect that a substance with such feeble germicidal powers as soap should be used to wash the hands after treating a case of erysipelas, and the same soap used

again to cleanse the site of a proposed incision or to clean the hands.

10. Instrument cabinets should be always aseptic. I frequently see elaborate glass-shelved and glass-covered instrument cases. They would be pleasant to look at if their beauty wasn't so often marred by accumulations of dust. A wooden shelf in a wooden cupboard with sterile white towels to lay the instruments upon would appear to the man who cared more for results than appearances as more likely to fill the requirements for surgical cleanliness than the most expensive and elaborate glass cases, if these are allowed to be receptacles for dust and pathogenic germs. My own practice is to have white sterile towels laid on shelves once a week, and then fumigate the cupboard with formalin.

12. No instrument should be laid on these shelves until first sterilized. If this rule is rigidly adhered to any instrument can be safely used if first dipped in pure carbolic acid and then in alcohol, or passed a few times through the flame of a spirit lamp. This consumes less time, and is in my opinion quite as effective as spending twenty minutes to sterilize a scalpel or probe or needle or hemostatic forceps in emergency cases or in the busy routine of office work.

13. Great care should be taken to disinfect any room to which infectious cases have found access, and as we never know who or what manner of diseased persons have occupied these rooms during our absence frequent fumigations should be used.

14. Too much care cannot be exercised by ourselves, lest we bring infection from the homes of our patients and make our offices foci for the dissemination of disease.

15. All syringes and irrigators should have an antiseptic passed through them before being filled with the solution to be used, and the nozzles should be first dipped in pure carbolic acid and then in alcohol.

16. While it is a safe surgical rule to assume that everything which is to come in contact with a wound or sore or ulcer should be first rendered sterile by boiling water or steam or hot air, yet in office work many things have to be done of apparently so little importance, and for which so small a fee is received, that time cannot be spared for thorough sterilization. By constant attention to minor details little things can be safely done without wasting time. By always acting on the principle that no job is completed until the instruments used are cleaned and ready for use again, it is possible to do the minor surgery of office practice without any longer delay than the half-minute required to pass

the steel instruments through the flame of the spirit lamp, or to dip them first in carbolic acid and then in alcohol. With silk kept in sterilizing solutions, catgut in breakable tubes, sponges, gauze, absorbent cotton, and bandages kept in air-tight jars, we can do any minor work with almost as little delay as we did it in the good old preantiseptic days.

NOTES ON THE CARE OF THE EPILEPTIC, WITH ESPECIAL REFERENCE TO COLONIZATION.

BY Q. W. HUNTER, M.D., LOUISVILLE, KENTUCKY.

"Of the submerged tenth a very considerable proportion owe their submergence to the failure of development or to the perverted development of the nervous system. With the growth and increasing pressure of civilization and of centralization in cities the number of these unfortunates certainly tends to increase rather than to decrease, though if alcohol and the syphilitic virus could be banished from the earth the products of human degeneration would certainly greatly lessen. Among these victims of circumstance none are more worthy of sympathy than those who suffer from epilepsy."

As indicated by the title of this contribution, it is the intention of the writer to briefly call attention to the advantages of colonization treatment of the epileptic, not to discuss the etiology, pathology, classification, or varieties of the disorder, except to take occasion to deny the existence of the so-called "idiopathic" epilepsy. It is believed this term is purely a misnomer, and should be eliminated.

It is an utter impossibility from available statistical data to accurately determine the total number of epileptics in the United States. There is a wide variance in estimates: thus a recent author says that one out of every two thousand of the population has epilepsy; another claims the proportion to be one in five hundred. Some of these unfortunates are incarcerated in prisons and insane asylums; many others are inmates of county poorhouses; perhaps a still greater number are partially cared for by relatives and friends; an inconsiderable percentage enjoy the benefits and advantages of colonization treatment.

As epilepsy is a disorder which in many instances promptly leads to mental deterioration and degradation, with greater or less tendency to violence, it is recognized that a certain percentage of the total number of epileptics must necessarily be maintained

in institutions where discipline can be based upon physical restraint, but the larger proportion, being capable of earning a livelihood and enjoying life generally, should not be deprived of employment and liberty.

There are many epileptics whose infirmity and limited resources render self-support impossible, and in consequence they become county, town, or State charges—*i.e.*, perforce they are maintained at the expense of the township in which they reside. take refuge in the county poorhouse, or in the State asylum for the insane; as few States have established institutions intended for reception and treatment of the epileptic poor. Too generally are they confined in insane asylums, subjected to similar treatment and restraint as hedge about the true maniac, occupying space in institutions provided by the State for another and perhaps more unfortunate class.

Epileptic children may be found in the various houses of detention, schools of reform, houses of refuge, etc. It is probable that in institutions of this character little or no attention is devoted to the adequate treatment of the epilepsy *per se,* based upon its true etiological and pathological factors; thus such children are permitted to finally lapse into a condition of confirmed epilepsy, imbecility, dementia, or a degeneracy, from either of which their reclamation may be impossible.

Experience and observation have amply demonstrated that to be successful the treatment of epilepsy must be instituted soon after inception of the disease, when it is possible to determine and remove its cause, and before the patient has became a confirmed and practically an incurable epileptic. In cases where the disease has existed for many years, amelioration only may be expected from any method of treatment. Further elaboration of this paragraph, likewise the *modus operandi* of logical medical and surgical treatment based upon the etiology if known, and the pathology if understood, will be reserved for a subsequent contribution *dextro tempore.*

Only during the last few years has the colonization management of epileptics received earnest consideration in this country, and the successful results of treatment in the few colonies thus far established reflect serious discredit upon the profession that this method was not more generally pursued in former years. Much has been learned in the last few decades relative to the proper management and treatment of this intractable disease, and amid proper surroundings, under the care of skilled nurses and attendants, a great deal may now be promised these unfortunates

provided treatment be not too long delayed. Under present methods of management one of the saddest features is the constant deterioration of intelligence as the seizures become more frequent and more pronounced, finally terminating in either dementia, imbecility, or degeneracy, as already outlined. There appears at present no adequate reason to anticipate anything more favorable in the vast majority of cases, the outlook in all being exceedingly grave. Of course, this statement has reference to epileptics confined in prisons, asylums, and poorhouses, and not the fortunate few who can avail themselves of the benefits of colonization treatment, nor those cases in young subjects in which early surgical treatment is resorted to.

While the facts are clearly recognized and admitted that the epileptic is irresponsible to a certain degree, that a powerful influence is exerted upon such individual by the feeling that regardless of circumstances or surroundings he may have a violent convulsion at any time, it is insisted that neither a poorhouse nor an insane asylum is an appropriate institution for his detention. Could there be provided for such persons a place where they could be regularly employed and amused, where an occasional epileptic attack would cause no excitement or comment, there would be exerted a material influence and incentive toward overcoming the disease. Such a home is afforded by an epileptic colony, under the immediate supervision of skilled medical and other attendants, where every effort is directed toward prevention and amelioration; the diet is carefully regulated, only those foodstuffs being allowed which experience has proven to be least injurious to patients of this class; the routine of daily occupation diverts the mind and prevents brooding, which latter has been shown to be decidedly detrimental and conducive to repeated attacks; careful attention to disorders of digestion, sleep, and otherwise promoting and maintaining the general physical health tend to lessen the frequency and severity of the attacks; but perhaps more potent than all these is relief from the mental and moral unrest and the knowledge that no opprobrium attaches to a convulsion should one occur. When practically all those around the patient suffer from an unfortunate condition similar to that which incapacitates himself, there does not exist the same feeling of shame and degradation as is experienced when such an individual lives amidst the ever-recurring active scenes of the business world. Moreover, the consciousness that his time is being employed to some advantage is a valuable incentive to increased effort, and he is encouraged therein by the attendants.

It is undoubted that there are many epileptics who would be competent to properly maintain and conduct themselves in an environment which would afford no exciting influences, in the quiet atmosphere of colony existence, whereas in the busy world of excitement, exaction, and activity they are totally incompetent to do so. Their mental equilibrium is not capable of withstanding the strain, and as a consequence attacks are frequent, which would not be the case under different surroundings.

It is indeed lamentable to contemplate the outlook for the confirmed epileptic. Under present conditions in this State he can look forward to only one of two institutions—*i.e.*, the almshouse or the asylum, in neither of which is he likely to receive intelligent care or adequate treatment. The next step, as has already been intimated, is imbecility or dementia—at best a gloomy prospect.

So far as the writer is able to ascertain the first to conceive the idea of an epileptic colony and put the scheme into practice appears to have been John Bost, a French clergyman, who in about 1856 started such an institution in La Force, a village near the city of Lyons, France; but it appears to have been the success of von Bodelschwing which demonstrated the inestimable value of this method of management as applied to epileptics. About thirty years ago he purchased a small farm at Bielefeld, Province of Westphalia, and with four subjects started a refuge which is now known all over the civilized world; hundreds of patients reside in the colony, there are schools, workshops, dairies, stores of various kinds, studios, farms, gardens, etc., etc., which not only afford remunerative labor for the subjects, but remove the *cnnui* of routine existence.

Experience has more than confirmed the brightest expectations, and Bielefeld has become a model upon which have been framed successful epileptic colonies in Germany, Switzerland, and Holland. In the United States there are at present but five such colonies, so far as the writer is aware, the two largest and most successful being the Craig Colony at Sonyea, New York, and the Pennsylvania Colony near Philadelphia.* The history of these two institutions is too well known to require repetition in this contribution.

Having in mind the beneficial results obtained at all of the colonies which have been thus far established, there should be a

*The writer is reminded, since this was written, that several other States are preparing for epileptic colonies—*e.g.*, Illinois, Texas, Ohio, Indiana. It is sincerely hoped that Kentucky will do likewise.—Q. W. H.

consensus of opinion as to the proper management and treatment of the confirmed epileptic—*i.e.,* it should be based upon colonization, industrial employment, diversion, and amusement; drugs are entitled at best to but secondary consideration. The quantity of medicine used in epileptic colonies, according to the best obtainable evidence, is inconsiderable.

The advantages of colony life are so apparent that the epileptic is not only willing but usually anxious to avail himself thereof. Of all the methods hitherto suggested for curing or ameliorating the condition of these unfortunates, the colony system unquestionably offers the most favorable results, and the practical experience of existing colonies emphasizes the benefits to be thereby obtained.

Kentucky is sorely in need of such an institution, as are other States whose epileptic poor are now detained in poorhouses and insane asylums. For the sake of suffering humanity some action should be taken toward securing an appropriation for purchase of the requisite real estate and erection of suitable buildings; public charity, public welfare, public morality demand it.

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Dr. Fay comments in the *France Médicale,* says the *Lancet,* on the Humbert case as an example of what is possible in depravity plus hysteria. He says that an illiterate country girl, Therese Humbert, invented stories of concealed treasures while still a child, and as a young woman, a pronounced hysteriac, she became convinced of the truth of what she was continually asserting in regard to the imaginary Crawford millions. This obsession persisted to the end, and still in prison, where she is serving a five-year sentence. He adds: "Hysteria produces its saints and its sinners. Psychologists have always been interested in the record of the holy nun known as Sainte Therese, who was affected with the gravest organic form of hysteria, hysteric paralysis with contractions. History now gives us in the life of the Humbert woman an amazing example of criminal human nature complicated by hysteria."

CORRESPONDENCE.

ON VACCINATION.

To the Editor of the MEDICAL AGE:

DEAR SIR—Having had over a quarter of a century's experience with smallpox while connected with the Detroit Board of Health, and thinking that some of my experiences and observations in dealing with this malady may be of some interest, I hereby submit the following:

Thorough and repeated vaccination will prevent smallpox, or at least so modify the disease, unless complicated, that fatal results are unknown. I never knew of a patient to die of smallpox who had been successfully vaccinated. Of the twelve cases terminating fatally in this city during the recent epidemic, not one had been successfully vaccinated. Two of these cases were hemorrhagic, and the remaining ten were confluent.

How long does vaccination protect against smallpox, and how often should vaccination be performed? There are exceptional cases where one successful vaccination lasts a lifetime, but in order to be on the safe side vaccination should be performed every five to seven years. If vaccination has been repeatedly and carefully performed by a competent vaccinator until it no longer takes, the patient is immune from smallpox. Should a person exposed to smallpox be vaccinated within three days after the exposure the vaccination will overcome the smallpox and the patient is safe as far as smallpox is concerned.

During the last outbreak of smallpox in this city 115 persons came to the City Hospital to care for those that were near and dear to them. Before being admitted they were properly vaccinated, and not one of them contracted the disease.

Unfavorable results of vaccination are caused by lack of skill or carelessness on the part of the vaccinator, or by improper lymph, or by not taking antiseptic precautions. No unfavorable results have been noticed when vaccinating with pure lymph, such as Parke, Davis & Co.'s, on an arm previously washed with soap. Do not draw blood when vaccinating, and have the patient wait five to ten minutes before rolling down the sleeve in order not to wipe off the virus. Apply a piece of clean muslin to the arm and change often. I have not come in contact with any person so far that is non-susceptible to vaccination.

S. H. GOODWIN, PH.D., M.D.,
Late House Physician to City Hospital.

DETROIT, MICH., Nov. 12, 1903.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

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EDITORIAL ARTICLES.

WILLIAM M. WARREN.

The death of Mr. William M. Warren, the publisher of this and other medical journals, is a calamity which will be bewailed far and wide. Mr. Warren was a man who was beloved and respected wherever he was known. He rose by sheer ability and force of character to a preëminent position in the business and financial world. His success was purely the result of his personal qualities. His chief characteristic was his unfailing enthusiasm, which was so manifestly genuine that it diffused itself by virtue of its own expansive energy. No one could be apathetic in its presence. In any enterprise he undertook, his courage, daring, pluck, and energy never deserted him. His sympathetic temperament had the charming quality of making the whole world kin to him, and the attraction of his affable personality was felt as much by his humblest employee as by his most intimate and trusted associate. While his business enterprises were always prompted by a sagacity and appreciation of their results in futurity which would have done honor to the foresight of a statesman, they were at the same time invariably carried out with a suavity and tactfulness which would have aroused envy in the mind of a diplomat.

The name of William M. Warren will not be forgotten when certain phases of medical science come to be recorded in history. To his incentive, important events in therapeutical science are directly due. One of the most important contributions made to therapeutical science during the past two or three years has been found to be that of adrenalin. Few who are reaping the advantages of this discovery realize or ever will realize how much they

are indebted to William M. Warren for its use, without whose aid and encouragement its gifted discoverer would probably never have undertaken the research which resulted in revealing so valuable a remedy. This however is but one of a hundred such examples to demonstrate what fountains of perpetual good may flow from one active and resourceful spirit.

William M. Warren was widely known in the medical profession, and his death will be deeply deplored, as it deprives medical science of an active and intelligent coöperator, in its pharmaceutical branches. It may be safely predicted that Mr. Warren's ultimate reputation will not rest entirely on his conspicuous triumphs in the business and financial world, but on his zeal for science and on the more enduring basis of good done his fellow-man. It is difficult to think of work better done than was his, and his achievements will reflect the sublime excellence of the exalted spirit of altruism in which they were conceived.

TRANSCENDENTAL MATHEMATICS, AN INFINITUDE OF NOTHINGNESS.

We have been wont of late to speak in terms of ridicule of the claims of the unchristlike, unscientific "Christian scientists," and to scoff at the only Lige Dowie and his recent New York crusade. Elijah II. gathered unto himself several thousand of his faithful dupes, his carriage and beautiful horses, his wife and her jewels, and went down into Gotham seeking what and whom he might "do." And the press scoffed, and Dr. Parkhurst ridiculed, and bad men stole his wife's jewels, and lawyers attached his coach and team for unpaid fees, and Lige has wended his way sadly back to Zion City with drooping plumage.

When the first Elijah was once upon a time going up an incline in the highway, his shiny pate glistening in the sun, some wicked children mocked him, saying, "Go up, bald head!" and a she-bear came out of the alley and ate some of the children. This was a great justification for Elijah, and the modern Lige Dowie no doubt finds justification for himself in the fact that New York has since his departure fallen into the greedy maw of the Tammany tiger.

These more recently organized delusions have been so much in the public mind of late that we are likely to overlook some of the more antiquated but still feebly persistent medical delusions.

The delusionist and dilutionist pupils of that "made-in-Ger-

many" fakir of early nineteenth century fame, Hahnemann, still roam about in our midst, more or less unchallenged. The figures of Dr. Simpson, confirmed by the mathematical professors in the University of Edinburgh, may perhaps he quoted here "lest we forget."

The method of preparation of homeopathic dilutions, as directed in the manuals of the cult, is to take one drop of the strong or mother tincture and add it to 100 drops of alcohol for the first dilution or attenuation; one drop from this in a second 100 drops of alcohol for the second dilution; and so on to the thirtieth dilution, which was Hahnemann's "favorite prescription," though even higher dilutions have been used. It is interesting to note what relation the original drop or grain of medicinal substance bears to the menstruum when the higher dilutions are reached:

The first dilution, as stated, is one drop in one and a half teaspoonfuls of alcohol.

The second, one drop in twenty-one fluidounces.

The third, one drop in 104 pints.

The sixth, one drop in 206,000 hogsheads.

The ninth, one drop in a lake of alcohol, fifty fathoms deep, with 250 square miles of surface area.

The twelfth, one drop in a sea of the same depth, six times the size of the Mediterranean.

The fifteenth, one drop in fourteen billion cubic miles of alcohol, an ocean 46,000 times greater than all the oceans of the earth.

The twenty-fourth, one drop in fourteen quintillion cubic miles of alcohol, equal to 140 masses extending from limit to limit of the orbit of Neptune.

The thirtieth dilution, Hahnemann's "favorite," equals one drop in fourteen septillion cubic miles of alcohol, a quantity equal to many hundred spheres, each with a semidiameter extending from the earth to the nearest fixed star.

And yet there are critics who consider that the capitalization of the United States Steel corporation is rather large. Human imagination cringes in weakness before such colossal figures. The late Oliver Wendell Holmes made a calculation which showed that one drop of the tincture of chamomile, given in the quantity ordered by Jahr's Manual, would have supplied every individual of the human family, past and present, with more than five billion doses each.

It is as though a single lonely gonococcus should slap omnipotent Zeus upon the wrist and say, "Oh, fudge!"

EDITORIAL NOTES.

A New Form of Torture for Siberian Prisoners.

A recent press dispatch from Germany conveys the intelligence that the political prisoners confined in Schlussenberg fortress are being subjected to torture in order that the effects of violet light upon their brains may be determined. It is claimed that the victims are placed in a large, many-windowed cell, into which the sunlight streams through violet panes, and at night from numerous electric lights. Only a few days of this treatment suffices to bring about a condition of stupefaction and, it is said, permanent disorder of the brain.

As this story emanates from Russian refugees it may not be true, but from what has already been so often told by travelers of the inhuman treatment awarded political prisoners by the governors of Siberian prisons, it is not in the least improbable.

Neuroses in Young Girls Caused by Piano Playing.

An investigation which has been carried on recently by a German psychologist has led him to form the conclusion that the majority of neuroses met with in young girls are caused by their being made to play the piano at too early an age. He states that out of every 1000 young girls who begin to learn the piano before they are fourteen, over half are affected by some form of nervous disease, while an equal number of other girls who are not taught the piano show only ten per cent nervous affections. From the observations of this investigator it would seem that if we wish to lessen nervous troubles among young girls it would be best to delay piano instruction until they reach a more mature age.

The Toy Pistol on the Fourth of July.

Owing to the fact that more than four hundred deaths occurred from tetanus following the last Fourth of July celebration, it has been urged on medical societies that they take suitable action to insure the enforcement of existing laws in regard to the sale of toy pistols and other dangerous toys. It is to be hoped that public opinion will frown on this kind of gaiety in the future. The loss of so much young and promising life is something for which no amount of patriotic noise will entirely compensate.

ITEMS AND NOTES.

Mercy Hospital, Columbus, has been incorporated, with a capital stock of $60,000.

Despite the active efforts of the health authorities smallpox continues to increase in Philadelphia.

In the freshman class of the medical school of Tufts University at Medford, Mass., of 150 students, 20 are women.

Twenty-one cases of smallpox have been detected in the small town of Lemont, near Chicago, by the health inspectors of the latter city.

The medical faculty of Queen's University, Kingston, Ont., celebrated its jubilee October 16 by the opening of a new physiologic and geologic building.

Two benefactions bestowed by Stephen Girard on the Pennsylvania Hospital of Philadelphia were fittingly commemorated on October 27 by the unveiling of a bronze tablet dedicated to his memory.

The Northern Pacific Beneficial Association, having already constructed two hospitals at Brainerd, Minn., and at Missoula, are contemplating the erection of a third at Tacoma, Wash.

The British Medical Association recently resolved to send a circular letter to the lay press requesting that the names of attending physicians in any case be suppressed, in the report made for the public. An exception is made in the case of any member of the royal family.

In Italy as elsewhere the medical profession is overstocked, and the number of practitioners is steadily increasing. The number at the present time is given as 22,139, as against 18,984 in 1882. Of medical women there are now twenty, while in 1882 there were only two.

The French Academy of Medicine has awarded the prize of 100,000 francs ($20,000) for the most remarkable scientific work to Dr. Roux, of the Pasteur Institute. Dr. Roux accepted the prize, but requested that he be allowed to devote the amount to investigations at the Pasteur Institute.

The Paris authorities have originated the idea of allowing each hospital to print a set of ten picture postal cards illustrating the various services and scenes in the hospitals. They are to be sold by the doorkeeper for the benefit of the sick.

Dr. Karl Ballod recently read a paper before the International Statistical Conference on the mortality in large cities, contending that cities having a population of 1,000,000 in Western Europe were healthier than smaller cities because the latter's sanitary precautions were far inferior to those of the larger cities.

An international Congress of School Hygiene will be held at Nuremberg, Germany, on April 4 to 9, 1904. All persons interested in this subject are eligible to membership, after approval by the local committee. The membership fee is $5. Papers and discussions may be in any European language, but the use by preference of English, French, or German is urged.

An opinion in a case was rendered recently which established the legal right of Christian scientists to treat diseases of all kinds without danger of civil or criminal liability so long as they can confine themselves to Christian science practice. In the same opinion, however, the court held that there was evidence upon which a jury might properly find that a defendant had deceived the plaintiff as to his injury.

The German charlatan Runge has been condemned to three months' imprisonment at Lauenburg on account of the death of a young woman whom he treated by extensive venesection and application of twenty-two leeches. She had a gastric ulcer, and succumbed within a few days to debility from the loss of so much blood. Another charlatan, Scheibler, has been fined $75 at Berlin for fraudulent practices and the use of the title professor.

A German physician, Schottelius, has been (says the *Journal of the American Medical Association*) carrying out some experiments on some chickens which are highly interesting, as tending to show that some bacteria are necessary to life. Five new-born chickens were given sterilized food, and though they ate much more than other chickens, none was able to live more than eleven to twenty-nine days. The digestion seemed to take place normally, but there was no increase in size. Schottelius made another experiment, which consisted in giving some of these chickens a culture of bacillus coli gallinarum. The chickens began to grow larger immediately, and no anomaly was noticed.

The American Public Health Association, at its recent meeting in Washington, D. C., elected the following officers: President, Dr. Carlos J. Findlay, of Havana, Cuba; first vice-president, Dr. J. R. Monjaras, of Mexico City; second vice-president, Dr. William C. Woodward, of the District of Columbia; secretary, Dr. Charles O. Prabst, of Columbus, O.; treasurer, Dr. Frank W. Wright, formerly city health officer of New Haven, Conn.

Surgeon-General Rixey in his annual report recommends that Congressional action be asked for authority to rename the different grades of the medical corps now existing as follows: In place of surgeon-general, surgeon-admiral; and in the other grades medical director to become surgeon-captain; medical inspector, surgeon-commander; surgeon, surgeon-lieutenant-commander; passed assistant surgeon, surgeon-lieutenant; and assistant surgeon, surgeon-lieutenant (junior grade).

Elisha Kent Kane, physician, scientist, and explorer, says the *Philadelphia Medical Journal,* was honored on the occasion of the twenty-first anniversary of the founding of the school bearing his name, at Twenty-sixth and Jefferson streets, Philadelphia. Mrs. Thomas L. Kane, of Kane, Pa., presented to the school four water-color paintings by Mr. Kane, done while he was ice-bound on the expedition he led in relief of the Sir John Franklin party that had crossed the Arctic circle in search of the north pole. Amos Bonsal, the last survivor of the relief party, made an address.

The successful physician, says the *Northwestern Lancet,* is usually the man who attends strictly to his own business, and refrains from intruding into the affairs of others; who speaks kindly of his fellow practitioner, whether he deserves it or not; who is studious and observant, and profits by his own and the experience of others; who is full of good cheer, and is competent to give wholesome advice. If all physicians belonged to this school the medical profession would be a mighty power, capable of engineering mighty plans for the good of the people, united and respected, free from unjust criticism, and possessed of more than a "common mind."

The German Committee of the Virchow Memorial announce in a document dated October 13, the anniversary of Virchow's eighty-second birthday, that the proposal to erect a statue of

Virchow in one of the public streets of Berlin, near the place where his scientific work was conducted, will be carried out. They thank those who have already contributed and appeal for further funds. Contributions will be received by the Bankhaus Mendelssohn und Cie, Berlin, W. Jagerstr. 49, 50. An obelisk of unpolished gray granite has been placed over Virchow's grave in the old Matthaikirchof, Berlin. It bears on one side a black marble tablet, on which is inscribed "Rudolph Virchow," and the date of his birth and death.

Duplant, of Lyons, a pupil of Professor Tripier, of Lyons, published in 1898 a work in which he declared that it was not proven that cancer ever succeeded ulcer of the stomach, and went so far as to say that such an event never took place. Dr. Andistere, according to a contemporary, has just published a thesis in which he proves that such a transformation may take place and is not rare. This is most frequently seen in ulcers situated in the prepyloric region, and begins by the borders of the ulcer. A diagnosis can be made out by the persistence of the morbid symptoms after prolonged treatment, especially the pain. The prognosis is much more grave than that of ordinary cancer, as complications of both diseases may supervene.

The physicians in Bavaria have been instituting, according to a contemporary, an inquiry as to the number of persons without medical attendance in their last illness. They find that in a large part of the country a physician was summoned in less than half of the cases of illness that terminated fatally, and in certain districts only 10.5 per cent of the fatal cases had any medical attendance. The proportion is larger in the cities. In Baden 71.3 per cent had had medical attendance, and in Mosbach 62.1 per cent. Only 51.7 per cent of the children under one year had had medical attendance during their last illness, but the proportion rises to 91.9 per cent in cases of children more than a year old.

According to the *British Medical Journal,* at Helsingfors in Finland medical practitioners, it is said, dictate their prescriptions to their patients through the telephone. The patient has to repeat the prescription after dictation, and each prescription is marked with a number corresponding to that under which it is entered in the practitioner's case-book. The system seems at first sight to be fraught with greater risks of evil consequences even than those which Mr. Idris has attributed to the dispensing of drugs by doctors. It is true the danger of fatal mistakes is minimized

by a provision of the law which forbids the prescription of toxic substances by telephone. Nevertheless, there remain large possibilities of results to say the least unpleasant arising from this mode of prescribing.

THE plan of a summer camp for the insane, says the *New York Medical Journal,* has been successfully tried by Dr. Eugene H. Howard, superintendent of the Rochester Hospital, under direction of the State Commission in Lunacy. The camp was situated on the shore of Lake Ontario in the town of Webster, eight miles from Rochester. Only harmless and partly recovered patients were allowed to occupy the thirty tents erected on four acres of ground surrounding an old-fashioned cottage, with barns, and seventy-two men and one hundred and twenty-eight women were cared for with such excellent results that Dr. Howard has decided to make the innovation permanent. The demeanor of the patients, relieved from restraint, was carefully watched, and it was noticed that improvement was rapid.

AN increase in the death-rate of the army from 13.94 per 1000 in 1901 to 15.49 per 1000 in 1902 is shown in the annual report of Surgeon-General R. M. O'Reilly for the fiscal year ending June 30. This increase is, according to *American Medicine,* attributed to cholera, which caused 3.54 deaths per 1000. A slight improvement appears in the hospital admission rate for disease and injury, which declined from 17.9159 per 1000 in 1901 to 17.1651 per 1000 in 1902. Discussing other features of the health of the army, Surgeon-General O'Reilly's report says: "The enrolment of about 5000 native Filipino scouts having added a new racial element to the army, it becomes a matter of much interest to study the camparative effects of disease on them and on our white and colored troops. For the whole army at home and abroad during the year of 1902, the white troops showed an admission rate of 17.0033 per 1000 and a death-rate of 14.40. The negro troops had 18.9774 admissions and 24.11 deaths per 1000, and the Malay scouts 17.0721 admissions per 1000 and 24.4 deaths. The white race, therefore, gave the lowest figure in sickness and much the lowest mortality. The black race led in both, although the Malay closely approached it in death-rate. The steadily increasing prevalence of venereal disease is the most discouraging feature in the sick report of the army."

NEW PUBLICATIONS.

NOSE AND THROAT WORK.

The appearance of a new general practitioner's manual of nose and throat work is evidence of a demand for such a volume, and Dr. Richards's new book is certainly entitled to a place of merit in the list. It is undoubtedly a most readable book, and carries between its covers a minimum of dead ballast. The author deals almost or not at all with theory, but gives plenty of useful information based upon clinical experience. The book is free from dogmatic assertion, is well arranged and indexed, and should be well received in the field for which it is intended. Dr. Richards is to be congratulated upon the work. There should be an early demand for a new edition of this volume.

Nose and Throat Work for the General Practitioner. By George L. Richards, M.D., Fellow American Laryngological, Rhinological, and Otological Society; Otologist and Laryngologist Fall River Union Hospital, Fall River, Mass. New York: Published by International Journal of Surgery Co.

ZIEGLER'S PATHOLOGY.

The tenth edition of this valuable work is an indication of the permanent position it has attained as an accepted text-book of the science of which it treats. It has been thoroughly revised, and is in all particulars thoroughly up-to-date. The translation has been made by Professor Warthin, of the University of Michigan. Many new and colored illustrations appear, and the publishers have spared no effort to make the work a successful presentation of the author's labors.

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THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Operative Treatment of Ascites.

Sinclair White (*British Medical Journal,* Oct. 10, 1903) says there is indisputable evidence that cirrhosis of the liver accompanied by ascites is not always a hopeless disease.

The ascites can be permanently cured in a considerable percentage of cases by operation.

There is reason for thinking that the operation of epiplorrhaphy may not only cure the ascites, but also lead to partial regeneration of the damaged liver cells.

Tapping alone has occasionally cured ascites, and should be tried once, or oftener, before proceeding with the more serious operation.

The operation of epiplorrhaphy is a formidable one and should only be undertaken in selected cases.

The divergent opinions respecting the significance of ascites in cirrhosis of the liver are best explained by assuming that the disease has more than one type, and that while in one class of cases, owing to the damage sustained by the hepatic cells, the patient is hopelessly incurable by the time ascites has appeared, in a second and probably more numerous class the incidence of the poison has fallen more especially on the hepatic connective tissue, leading to injurious pressure on the portal venous system and peritoneal effusion before the liver cells have become seriously damaged.

Prostatectomy and Galvanocaustic Prostatotomy (Bottini's Operation): Their Present Status in the Radical Treatment of the Hypertrophied Prostate Gland.

Willy Meyer (*Medical Record,* Oct. 24, 1903) says that the operations making a direct attack upon the enlarged prostate are preferable to those aiming to exert an indirect influence. According to Meyer we have two useful procedures for the direct treatment of the enlarged prostate gland—*i.e.,* prostatectomy and galvanocaustic prostatotomy (Bottini's operation).

In selecting the method indicated in the given case we must individualize and be guided by anatomic, pathologic, and social conditions.

Prostatectomy is the most radical and most surgical procedure; it should be the operation of choice whenever promising success.

Perineal prostatectomy offers advantages over the suprapubic method, since it enables the operator to do the operation under the guidance of his eyes.

Debilitated patients who seem unfit subjects for the more radical operation should not be at once relegated to catheter life, nor should prostatectomy be performed in order "to let them down easy;" they should be advised to have Bottini's operation done if possible.

Surgeons should familiarize themselves with both methods in order to be in a position to do justice to their patients.

It is the duty of those refusing to do Bottini's operation under any circumstances to nevertheless advise the latter in cases in which the patient asks for more radical relief and the operation with the knife seems contraindicated.

Further carefully compiled statistics as to the late results of both operative procedures—preferably in the hands of one man—are desirable, in that they will increase our knowledge with reference to the selection of the proper method in the individual case.

Surgical Treatment of Exophthalmic Goitre.

F. Curtis (*Annals of Surgery*, August, 1903) states that surgical treatment is capable of curing many cases of exophthalmic goitre which have not yielded to medicine, but has very serious dangers of its own, especially that of acute exacerbation of the symptoms known as thyroidism or thyroid poisoning, which may follow any operation in these patients, whether the operation be performed on the thyroid gland itself or on other parts of the body. Exophthalmic goitre, it is held, can be cured both by thyroidectomy and by sympathectomy, or the removal of some or all of the sympathetic ganglia in the neck. A perfect result, the author asserts, can be expected in about sixty per cent of the cases of thyroidectomy. An immediately good result appears to be the rule in sympathectomy, but sufficient time has not elapsed to judge of the permanence of the cure after this operation. The relative mortality of the two methods would seem to favor sympathectomy. The author's experience of thyroidectomy has con-

sisted of eleven cases, with three deaths from acute thyroidism and six cures. Of the remaining two patients one was improved and the other lost sight of. Of the operation of sympathectomy, which the author has performed in seven cases, the results have not been much better than those of thyroidectomy, as there were two deaths from acute thyroid poisoning, and a third probably due to the anesthetic. The author thinks that it is advisable to use local cocaine anesthesia for thyroidectomy, and to give this method a trial also in sympathectomy. The latter operation should, he holds, be performed on one side at a time, with an interval between the operations sufficiently prolonged to permit the patient to recover from the effects of the first.

The author considers at length the different theories that have been advanced to account for thyroid poisoning after operations for goitre. No definite conclusions are derived from this review, but it is suggested that the frequency of thyroidismus after sympathectomy, and in operations not directly involving the thyroid gland, is in favor of a nervous origin of this condition.

Sarcomatous Transformation of Myomata.

Myomata showing sarcomatous degeneration are, according to F. S. Cullen (*Journal of the American Medical Association*, Oct. 24, 1903), developed from two sources: (1) Connective tissue, leading to spindle or round-celled formation, and (2) uterine muscle. Clinically it is noted that a myomatous uterus, after being dormant for possibly several years, becomes the seat of a rapid enlargement. If the growth is submucous, portions may be expelled from time to time and there is an offensive discharge, with cachexia.

From recent laboratory investigations the following rules for operative intervention may be laid down: (1) Whenever sarcoma or carcinoma may coexist with myoma, panhysterectomy is imperative—not amputation through the cervix. (2) Bisection of the uterus is contraindicated where there is a possibility of a malignant growth developing in or associated with the myomatous uterus. (3) In every case of hysteromyomectomy it will be advisable to have an assistant open the uterus immediately on its removal to determine if carcinoma of the body exists, and to find out whether the myoma has become sarcomatous. If malignancy is detected the cervix can thus be removed without delay.

MEDICINE.

A Few Tongue Indications.

In a recent issue of the *Chicago Medical Times* the following points are brought out by the editor:

Fur upon the tongue denotes faults of the circulation and debility or inefficient action of the stomach. If it is very moist, with lack of tone, there is anemia. If the tongue be flabby or if there is tremulousness, these are evidences of marked blood impoverishment with debility, usually extreme. If the tongue be dry, a severe impression upon the nervous system, with irritability, has been made, which has suspended secretion. If dry and deep red, there is also an absence of the normal acids, and these supplied often correct a long train of symptoms.

If bright-red, raw, or glazed, there is paralysis of the sympathetic and great loss of strength—great weakness and prostration. With these symptoms the digestive apparatus is inoperative usually. If the tongue is brown, or brownish-black, with a dry, brown coat, nervous and muscular prostration are extreme and death is imminent. These conditions must be treated with acids and nux vomica, and easily absorbed predigested nourishment. The blood is broken down with these symptoms also. If dark-brown or black there is septic absorption more or less extensive, and general antiseptic treatment is demanded.

A white tongue with pale membranes indicates an excess of acids and demands alkaline medication. If with the above appearance there is a yellowish coat at the base or in the center, there is hepatic irritation with the acidity.

If the coating is white and thick, or yellowish-white and thick, with loss of appetite and depression, there is venous congestion with great inactivity of the entire digestive tract. There is lack of tone and general suspension of activity of the glandular structure of the digestive tract. This may be aroused by first thoroughly evacuating the stomach and bowels, and by giving local and general tonics.

With fissures in the tongue there is usually constipation.

If the tongue is blue or inclined to a purple tint, there is deficiency of aeration of the blood, a deficiency of red blood-corpuscles, and impairment of the general circulation.

The serious tongue indications are the very dry, thin, pointed, dark-red tongue; the sleek, glazed, red tongue; the blue tongue; the black or dark purple tongue; and the tremulous tongue.

The Early Diagnosis of Mental Diseases.

C. B. Burr at the recent meeting of the American Association of Obstetricians and Gynecologists (reported in *American Medicine,* Oct. 24, 1903) said the definition of insanity, "A prolonged departure from the individual's normal standard of thinking, feeling, and acting," will for working purposes ordinarily be found sufficient. A comprehensive definition would include mental defect of whatever cause and mental perturbation of whatever degree. Any or all of the elemental processes of sensation, perception, ideation, reasoning, judgment, memory, may be impaired in insanity. The nature and degree of impairment of these elemental processes and of emotion and volition, in different forms of insanity, were touched upon, and at greater length the distinction between confirmed inebriety and true insanity of alcoholic origin, the differential diagnosis of alcoholic pseudoparesis and paretic dementia, certain phases of hysteria, and the diagnostic difficulties pertaining to paranoia and recurrent mania. Neurasthenia is a euphemism often employed to obviate the necessity for plain speaking, or may be used erroneously to explain the symptoms in the early stages of an organic malady. The self-deception on the part of the physician or his inaccuracy in diagnosis leads to improper methods of management, and the prescription of travel often made for such patients is deplored, and incidentally hospital care for neurasthenic cases is advised.

Remarks on Fifty Cases of Bilharzia Disease, with Special Reference to the Characters of the White Corpuscles Found in the Blood and Urine.

S. R. Douglas and F. H. Hardy (*Lancet,* Oct. 10, 1903) come to the folowing conclusions:

1. Histological characters of the blood: (*a*) The percentage of the coarse-grained eosinophile leucocytes is, with very few exceptions, much above the average percentage found in normal blood. (*b*) This increase goes hand in hand with a proportional diminution in the percentage of the polymorphonuclear leucocytes. (*c*) Less frequent is an increase of the large mononuclear leucocytes, and where this is present it is associated with a diminution of the lymphocytes.

2. Histological characters of the white blood-corpuscles in the urinary sediment. A very large proportion of the leucocytes found in the urinary sediment are the coarse-grained eosinophiles,

the remainder being almost all polymorphonuclears, lymphocytes and large mononuclear leucocytes being uncommon.

3. Variations in the number of ova in the urine. The ova vary in number greatly from day to day; large quantities of blood and other cells are often present when but few ova can be found.

Experiments with Subcutaneous Feeding with Albumins.

Trollinier (*Wiener klin. Wochenschrift,* No. 40, 1903) in his experiments used the form of albumin midway between albumin and albumose, taking a ten-per-cent solution and injecting it under the skin of dogs; he also made an analogous experiment on two humans, the results of which he reports. Great care is necessary in making these injections, as they readily produce abscesses and painful inflammatory swellings. From the fact that the albumin does not appear in the urine the author draws the conclusion that it is used up by the body for purposes of nutrition. The total amount of albumin employed was small.

Diazo-reaction.

Ott (*Wiener klin. Rundschau,* No. 41, 1903) believes that the reason this reaction has lost its prestige is due to the fact that it is complicated, and as a rule not correctly carried out. He emphasizes the fact that the reagents must be pure and the urine fresh, whilst the patient should abstain from medication. The presence of the cherry-red color is necessary for a positive reaction; this after twenty-four hours gives place to a green or violet colored sediment. Correctly carried out this reaction is of great value, especially in the prognosis of phthisis, as its continued appearance is indicative of a grave condition.

THERAPEUTICS.

Treatment of Cancers of the Prostate.

R. H. Greene (*New York Medical Journal,* Oct. 24, 1903) divides the treatment into three divisions: (1) Preventive; (2) palliative; (3) curative.

Preventive.—The ultimate analysis of the question of preventive treatment seems to lead to the conclusion that if gonorrheal infection could be prevented in the first place, the occurrence of cancer of the prostate would become much less frequent; for

it is now well established that chronic posterior urethritis is a very frequent complication of acute urethritis. More and more evidence is brought out to demonstrate that chronic posterior urethritis and chronic prostatitis go hand in hand, that the latter plays a causative part in the formation of the so-called prostatic hypertrophy, and that this in turn, reasoning from analogy, plays a part in the frequency of the formation of cancer. It would seem evident, also, that a more prolonged and careful treatment of chronic posterior urethritis and prostatitis than has generally been the custom would tend to prevent the so-called hypertrophy and the cancer secondary thereto.

Palliative.—It is evident, from a review of the literature on the subject, that in the past a vast majority of cases of cancer in the prostate have been diagnosticated after metastasis had already taken place and the system had become infected. Necessarily, then, operations attempted with the idea of cure have been failures. Something may be said, however, in favor of operations undertaken with the idea of prolonging life, or more particularly in the late stages of the disease, for the relief of symptoms, particularly pain. Taillefer in one case considered the making of a permanent suprapubic opening responsible for the rapid involvement of the corpora cavernosa, while on the other hand, Delore in two cases by the same operations thinks he gave relief. Desnos by resecting part of the prostate in two cases gave relief from pain apparently caused by pressure. The writer, from a somewhat limited experience in palliative operations for tuberculosis and cancer in other parts of the genito-urinary tract, is of the opinion that palliative operations are justifiable in prostatic carcinoma, but that they should be well thought out beforehand, and not attempted if of a character to make the after-progress of the disease more distressing to the patient.

Curative.—So far the only curative procedure at our command consists of removal of the cancerous prostate before metastasis has taken place; that it is possible to recognize it early enough to do that seems evident.

Treatment of Tuberculosis of the Uterus and Adnexa.

It is universally agreed, according to J. H. Targett (*British Medical Journal,* Oct. 17, 1903), that laparotomy is attended with very beneficial results in cases of diffuse or localized tuberculous ascites. If suppuration has occurred and drainage is necessary, the advantages of vaginal drainage through Douglas's pouch are

considerable. The rotten condition of the intestinal wall under these circumstances renders the long use of a drainage-tube dangerous from the risk of producing a fecal fistula.

When the tubes are found to be thickened from tubercle in the course of a laparotomy for ascites, they should be removed if the adhesions are not too dense. He has met with two or three cases in which the removal or disturbance of tuberculous organs has been followed by a rapidly fatal toxemia, as though some poisonous product existing in the tissues had been liberated.

Whether or not it is wise to attempt the removal of caseous tubes when surrounded by dense adhesions is a question which further experience will probably decide. But there can be no doubt that the tuberculous pyosalpinx is best treated by abdominal resection. The dangers of laparotomy are the adhesion of bowel to the abdominal wall, the density of the fibrous adhesions around the appendages, the rottenness of the bowel and tissues generally, and the risk of fecal fistulæ.

When the uterus is affected its tissues are easily torn, and serious ruptures have resulted from the ordinary operation of dilating and curetting that organ.

Treatment of Syphilis by Iodine Enemas.

Zeissl (*Die Aertzliche Praxis,* 16, 1903) advises the administration of iodides in enemas, in those cases in which disagreeable symptoms are manifested through administration per os. The formula he employs is 2 grammes of sodium or lithium iodide dissolved in 30 cubic centimeters of water, with the addition of 5 drops of tincture of opium, in order that the enema may be retained in the rectum for some time. This is introduced at one sitting with a Nélaton catheter and is rapidly absorbed. He has employed this method in twelve cases with good results. One case, that of a woman who on the administration of potassium iodide by the mouth evidenced symptoms of iodism, headaches, dizziness, etc., experienced no inconvenience by administration per rectum.

Adrenalin in the Treatment of Purpura Hemorrhagica.

M. Loeper and O. Crouzon (*Le Bulletin Médical,* Sept. 2, 1903) report a case of grave purpura which would not yield to treatment by ergotin, serum, calcium chloride, and the sulphate of quinine. Even adrenalin applied to the gums was of no avail in checking the local hemorrhage, but in twenty-four hours there

was marked improvement, and in five days a complete cure of the condition, thanks to the administration of 4½ milligrammes of adrenalin. Up to the present time adrenalin has been administered by local application for nasal, laryngeal and ocular hemorrhages, subcutaneously or by intrapulmonary injections in hemoptysis, and by washings and ingestion in gastric and intestinal hemorrhages. The authors are aware of one case only in which a cure is reported in Werlhoff's disease after daily injections of one milligramme of adrenalin. In their case they tried the effect of absorption through the digestive tract, with excellent results, as shown above. —*Medical Record.*

The Treatment of Chancroids.

Stenzel (*Wiener klin. Wochenschrift,* No. 34, 1903) does not believe in the usual treatment by powders, which he claims retard the healing of the ulcer by scab formation, and limits himself to two methods: (1) Cauterization of the ulcer with the actual cautery, which is painless if the seat of operation is previously cocainized. This method he employs in all cases where the ulcers are not too large and lymphangitis is not present; in the serpiginous form it is also indicated. In eradication of buboes the cautery should be used on the wound to prevent chancroidal infection. (2) In simple uncomplicated ulcers within the preputial fold he applies a 25-per-cent solution of cupric sulphate, which, although it causes a severe edematous reaction, promotes rapid healing; its employment is contraindicated by swelling and tenderness of the regional glands and phimosis of even slight degree.

Treatment of Epididymitis by Puncture.

Baermann (*Deutsche med. Wochenschrift,* No. 40, 1903) punctured 28 cases of gonorrheal epididymitis, and found that in the majority of them more or less of an abscess formation with simultaneous hydrocele resulted, whilst gonococci were always found in the discharge; the other cases showed gonococci to be present without pus formation. In old cases of epididymitis he demonstrated gonococci possessing virulence enough so that with a favorable opportunity they could again infect the urethra. The author is convinced that all cases of gonorrheal epididymitis result from the invasion of the gonococcus by continuity from the urethra. Non-specific epididymitis has the same etiological factor as the urethritis to which it is secondary.

Radium in Medicine.

S. G. Tracy (*New York Medical Journal*, Oct. 24, 1903) says that the discovery of radium may make it necessary to change our theories of the old hypothesis about matter and the conservation of energy.

Radium may possibly open up the way for a cheaper and more wholesome lighting of houses by phosphorescence.

Radium is a practical agent to differentiate genuine gems from artificial.

Radium is a useful agent to kill bacteria.

Radium may be considered a valuable agent for the treatment of lupus, cancer, tuberculosis, and a possible agent to improve the eyesight and overcome partial blindness. No doubt later discoveries will show it to be of service in other diseased conditions.

A New Treatment for Infantile Gastroenteritis.

H. de Rothschild, of Paris (*Lancet*, Oct. 17, 1903), who founded a well appointed dispensary for infants, has made a study of gastroenteritis, a disease which is so fatal in infants that during some weeks of the year it brings about a mortality of 200 per week. On October 13 M. de Rothschild stated at the Academy of Medicine that despite all the treatments which he had employed he had never been able to bring the mortality below fifty per cent. When, however, acting on the advice of M. Roux and M. Metchnikoff, he treated his patients with skimmed milk to which ten per cent of lactic acid had been added, the malady was nipped in the bud; and between June 1 and October 1 he treated fourteen cases at his dispensary, all of which recovered.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Chancre of the Tonsils.

The *Internationales Centralblatt für Laryngologie* (vol. xix, No. 10) makes note of several cases obtained from recent literature. Rogers in *American Medicine* gives an account of one case. Asselberghs in a Brussels journal reported a chancre of the tonsil in an unmarried woman thirty years of age, with intact genitalia, followed by a roseola. The chancre was accompanied by suppurative involvement of the glands of the neck. Cheatham has re-

ported observing seven cases during a period of eighteen months, most of which had not been previously diagnosed; he believes that such cases are very often overlooked. Persistent inflammation of the tonsil with indolent swelling of the glands at the angle of the jaw should always arouse a suspicion of syphilis. The secondary skin eruptions in such cases have little weight; they are occasionally absent throughout. In many such cases the diagnosis must be established without aid in the way of history.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Member of the American Dermatological Association.

Malarial Origin of Skin Diseases.

Under the term "Paludides," M. F. Engman, of St. Louis, Mo., in a paper read before the annual meeting of the American Dermatological Association, at Washington, D. C., May 12 to 14, and published in the *Journal of Cutaneous Diseases* for November, 1903, enumerated the following dermatoses, in association with which the plasmodium has been demonstrated:

Herpes Simplex.—The most frequent eruption in this connection, usually appearing upon the nose, lips, eyelids, cheeks, and forehead.

Herpes Zoster.—In all of the cases reported, except one, the pains usually accompanying an outbreak were much less than usual, the vesicles being smaller and less inflammatory. They also appeared to involute more rapidly than they ordinarily do, while the slighter pain and feeling of soreness promptly disappeared under antipaludal treatment. In but two of these cases was there any general symptom; one had slight chills with some fever, and great pain along the course of the affected nerves. In the other there were the usual symptoms of chronic malarial poisoning of a mild form.

Pompholyx has always appeared to the writer from its characteristics as a vasomotor disturbance of toxic origin. This was strikingly confirmed by the study of four cases of pompholyx in which all the classical symptoms existed (the cold, clammy, moist hands, clusters of deep vesicles, etc.), by the finding of the malarial organism in the blood of the patient, and its subsequent complete and rapid cure under quinine.

Malarial urticaria is usually periodic in its manifestations, but it may occur at irregular intervals.

Purpuric eruptions of an acute character are rare in malaria. Small petechiæ are occasionally observed. Hemorrhages into herpetic vessels have been reported.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

The Treatment of Convergent Strabismus.

W. H. Craig (*Philadelphia Medical Journal*, Oct. 17, 1903) says that the earlier the child is seen the better the prospect for a cure.

The vision of squinting eyes can in a majority of cases be improved and some function restored if treatment is begun early.

A small percentage of cases of convergent squint can be cured by mydriatics, glasses, and proper exercises alone, without operation.

The correction by non-operative methods is much to be preferred, as the motility of the eye is more perfect and the deformity produced by sinking of the caruncle is avoided.

Operative procedures should be employed in those cases in which non-operative treatment after a thorough trial has failed, and in those cases in adults in which we operate for the cosmetic effect.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Choice of Method for the Relief of Retroversion and Retroflexion.

John Van D. Young (*Medical Record*, Oct. 24, 1903) makes the following deductions:

Retroversion and retroflexion are never simply malpositions of the fundus, but complex changes in the relation of the whole uterus to the other structures in the pelvis and to the pelvic wall.

THE PAGES OF
THE MEDICAL AGE.

Within the 40 pages of text of the AGE, not a single line of advertising is ever printed. There are no advertising inserts; no commercial notes of any description whatsoever. We regard each subscription as a contract with the physician to furnish him semi-monthly with 40 pages of the most reliable information that can possibly be collated.

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Very truly yours,
THE BUSINESS MANAGER,
Box 484, Detroit, Michigan.

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GREAT OAKS FROM LITTLE ACORNS GROW.—About eight years ago a small industrial seed was planted in Chicago which by proper nourishing and care has grown to the foremost institution of its kind in America. In 1895 Frank Betz began business in a small room 10x12 feet, making hot-air baths and surgical instruments. His belief that there was room for a concern making first-class goods and selling direct to the profession, cutting out middle men's profits, has been so justly fulfilled that the demand for his goods has now made it necessary to again enlarge his plant, which will give him a floor space of 320,000 square feet; surely a phenomenal growth in eight years, from 120 square feet. Now, what does this mean? First, his goods must be up to the requirements demanded by his purchasers; secondly, the prices lower than elsewhere asked. We believe that the general surgical instrument dealer is honest when he says he cannot compete with Betz prices. Why? The average dealer does not manufacture his own goods—where Betz does. He buys his raw material at first cost, and by strict economy, which is a decided item in a large plant, produces instruments which are guaranteed to be first-class, at a low cost, and cheerfully returns the purchase price if, in any case, dissatisfaction is manifested.

It has been our pleasure to know Mr. Betz personally during his entire business career, in his present line. He is liberally endowed with those necessary qualifications so essential to a successful surgical instrument manufacturer—skill covering the entire field of mechanics and an indomitable determination to produce the best goods at lowest cost, yet giving him a margin of profit. All in all how well Frank Betz & Co., of America, has succeeded is best exemplified by their solid and continuous growth. A glance at their new factory, elsewhere illustrated, will give you some idea of the size of their plant.—From the *International Journal of Surgery.*

DR. KARL VON RUCK, Director of the Sanitarium for Diseases of the Lungs and Throat, Asheville, North Carolina, contributes, in *The New York Medical Journal,* an article on the value of "Pepto-Mangan" in building up the blood of patients suffering from anemia due to pulmonary tuberculosis. In the tabulated statement of cases treated by this new remedy there is much food for the thoughtful physician. The results were very gratifying and lead one to suppose that this new agent (Pepto-Mangan) possesses not only the power of arresting further blood deterioration, but actually supplies to the blood the elemental constituents necessary for rebuilding wasted tissue. The six weeks' test of "Pepto-Mangan" by Dr. von Ruck, to say the least, is encouraging, and we trust other physicians having the facilities for observation will, in the cause of medical science, extend these tests still further. Every physician would be pleased to see his

The Age of Antisepsis

DOCTOR, this is pre-eminently the age of ANTISEPSIS, but the problem is how to secure that in a manner at once the most convenient and harmless, and at the same time accompanied by such an effect upon the tissues as to lead to rapid healing.

In TYREE'S ANTISEPTIC POWDER you will find a combination so skillfully made that it is destructive to pathogenic bacteria and yet bland and unirritating to the most delicate mucous membrane, and its application is accompanied by such a mild degree of stimulation and astringency as to promote the rapid healing of the tissues with which it comes into contact.

It has been used very successfully in Uterine and Vaginal Catarrhs, Gonorrhea and Gleet, in Dysentery, in Catarrhs of the Nose and Throat, and in Inflammation of the Mouth and Gums. Its great economy and convenience consists in the fact that you add the water yourself—paying for only the Antiseptic Powder. Thousands of physicians are making successful use of it every day. If you will only try it you will be quickly convinced of its great value.

If unfamiliar with this preparation, write for a trial package, which I shall take much pleasure in sending you free of all charge.

HALF-POUND BOX, POSTPAID, 80 CTS.

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WAR DEPARTMENT, SURGEON GENERAL'S OFFICE,

WASHINGTON, D.C., Jan. 3, 1896.

This is to certify that the exact antiseptic strength of "TYREE'S PULV. ANTISEPTIC COMP." is one part of the powder to fifty of water (1.50). Test-tubes containing peptonized beef broth were charged with the powder (Tyree's Antiseptic Powder). The solutions were then inoculated with the Anthrax Bacillus, and with the Staphylococci of Pus, and the tubes placed in the incubator for 48 hours at a temperature of 38° C. On removing tubes from the incubator, it was found that in the solutions of one in ten to one in fifty there was no development of bacteria.

W. M. GRAY, M.D.,
Microscopist to Army Medical Museum.

anemic patients gaining in weight, and also to know that the blood was being revivified by those constituents necessary to a return to health.

One feature of the doctor's test must not be overlooked, that the stomach, although in such cases very irritable, retained "Pepto-Mangan;" no disturbance of digestive function occurring nor constipation supervening. In the article referred to the doctor states that "in all cases the improvement in blood condition was highly satisfactory; in quite a number phenomenal." We commend the doctor's communication in its entirety to the thoughtful physician.—From the *Universal Medical Journal,* Philadelphia.

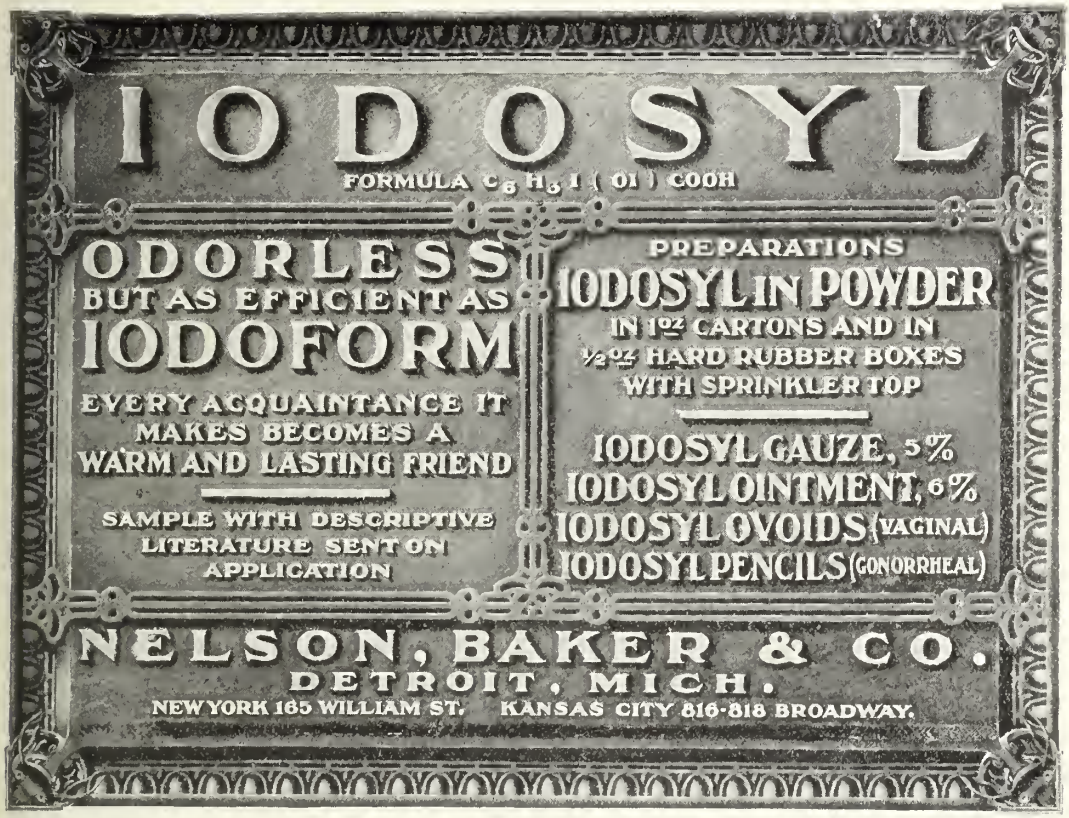
SAMPLE OF HOW ALL TALK ABOUT THE MARSHALL BUGGY CASE AND SADDLE BAGS.

SCOTLAND, ARK.

DEAR SIR—When I saw the cut I thought it probably overdrawn, but find the bags even more handsome than the figure; the inside is perfection realized. Convenience is so pronounced that I would not use any other make if furnished gratis. Permit me to congratulate you in placing before the medical profession the most perfect case-bag in its every feature that the market affords. Wishing you that complete success which your genius merits, I am

Yours with respect,
J. C. EMMONS, M.D.

A PLACE WHERE NERVOUS AND MENTAL CASES ARE BEING GREATLY HELPED.—Dr. Penn W. Ransom, of Rockford, Ill., for the past fifteen years has been conducting a private home for the care of nervous and mild mental cases. He is a regular graduate, and does his work entirely through the medical profession, relying upon his fellow physicians for indorsement. He has room for a limited number of patients and gives his whole time to their care. Owing to the fact that nervous and mental troubles are rapidly on the increase, and that physicians cannot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properly care for same quite often in private homes, it would be advantageous to consult the sanitarium regarding them, especially before having mental cases committed to a state institution, and learn what can be done for them at this place.

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It is therefore urged that the profession give this milk preference over the usual infant foods, and super-sweetened condensed milk and the impure or unfit milk which is procured from dairymen. This is urged because a large experience has convinced me that only cow's milk is a reliable infant food, and that Highland Brand Evaporated Cream represents the unvarying and healthy cow's milk. In fact I cannot at this time recall a single

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instance in which an infant ever thrived on cow's milk which was bought at a dairy. On Highland Brand Evaporated Cream, however, I can say that I have never known failure to occur.—CHARLES W. MCINTYRE, M.D., New Albany, Ind.

THE ADVANTAGES OF COMBINING REMEDIES.—John Moir, L.R.C.P. and L.R.C.S. Ed., in *The Therapist*, London, says: "Latterly I have been using heroin very extensively in tablet form in combination with Antikamnia, and found the combination to act charmingly, both for relieving pain and in procuring comfortable, restful sleep, so very desirable and necessary after sleepless periods, caused by a protracted, irritable cough. The soothing rest in these cases was also characterized by a light but well-marked fall in temperature; but the greatest benefit of all in this treatment is that, although the distressing frequency of the respiration was reduced, it was stronger and heavier and less spasmodic, with a beneficial effect upon the heart at the same time. The tablets I use contain Antikamnia 5 grains, heroin hydrochlor. 1/12 grain, and were given every two, three, or four hours, in cases of cough, bronchitis, and respiratory affections generally, according to the severity of the symptoms, but usually one tablet every three hours. I found that the respiration was rendered easy, the expectoration was loosened without difficulty, and sleep was more readily obtained than with morphine, and unlike morphine there were no after-effects. I have personally been

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taking Antikamnia and Heroin Tablets three times a day for an irritating cough, with occasional inclination to breathlessness; so that I have every reason to be thoroughly satisfied with them as sedatives and calmatives."

Some Uses of Iodipin.—Dr. Ed. Hönigschmied reports his experience with iodipin (iodized sesame oil) in impetigo, chronic eczema, neuralgias, scrofulous affections of the eyes and nose, and emphysema. As is known, impetigo facies, when improperly treated, is characterized by its long duration, the intolerable itching, and disfigurement of the patient for the time being. The author states that since using iodipin this disease belongs to those he cures quickly. A few cases are described in detail, to illustrate the effects of the remedy. In a severe case occurring in a child of four months, a small teaspoonful of iodipin 10 per cent, given once daily, produced marked improvement in a week and complete cure within a month. In all the cases of impetigo, from 100 to 250 Gm. (3½ to 8½ oz.) of iodipin sufficed for a cure.

In a case of scrofulous inflammation of the eyes and nose—the sclerotica of both eyes forming a vascular wall around the cornea (the latter cloudy), photophobia and lacrimation, the nose immensely swollen and discharging a sanguino-purulent secretion, and the cervical glands enlarged—thirty injections of iodipin 25 per cent, each 15 Gm. (½ oz.), effected recovery. There was no pain during or after the injections. However, some months later, a recurrence of the symptoms took place, but 250 Gm. (8½ oz.) of iodipin 10 per cent permanently dispelled them.

Finally, a large number of cases of mild scrofulous affections—such as swollen glands of various forms, eye disease, etc.—were regularly benefited by iodipin; and so was pulmonary emphysema.—*Aerztl. Central.-Ztg.*, xiv, No. 36.

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The uterosacral ligaments suspend the uterus by their attachment to the lower segment and act as a swing in supporting the rectum. Factors causing the yielding of these ligaments are: Injuries to the pelvic diaphragm; increased intra-abdominal pressure; constipation; straining at stool; injuries to the rectovaginal septum, causing retraction of anus, with rectocele.

Any method for the relief of these conditions must consider and relieve all the complicating lesions, not the least of these being the pathological conditions of the endometrium.

All methods for holding the fundus forward must rely upon the integrity of the uterosacral ligaments, together with the fibrous connective tissue of the broad ligaments to suspend the uterus.

Non-operative measures are applicable to acute traumatic and replaceable non-complicated cases, and depend for their value upon relief of pelvic engorgement, the restoration of normal elasticity and tone to the ligaments and muscular structures.

The Alexander operation has a limited field of usefulness, and is of value only when there is retroflexion and the other ligaments are strong enough to support the uterus, with proper relief of other complications. It must never be forgotten that traction on the round ligaments tends to lower the plane of the uterus.

Ventral suspension, when performed in combination with other procedures, does relieve the malposition, and prevents a recurrence of the same. Its dangers when properly performed are small, if any, in subsequent pregnancies. The advantages of the operation are the ease and rapidity of its performance.

Ventral fixation is applicable only when the patient has passed the child-bearing period.

The ideal procedure is as follows: Curettage; repair of injuries to the cervix, retrovaginal septum, and anterior wall of the vagina; laparotomy, sacrosuspension; Bissell operation. The disadvantages are the length of time necessary for the operation and its difficulty of performance in fat subjects.

In place of the Bissell operation, a ventral suspension may be substituted. This I believe is wise when many adhesions have been broken up and the posterior surface of the uterus is denuded of peritoneal covering, or the patient's condition demands haste.

In nulliparæ a pessary should be worn for six months to prevent traction on the uterosacral ligaments until they have regained their tone. The action of the pessary is due to the fact

that resting on the superior surface of the symphysis the lower segment of the uterus is held upward, and the strain taken off the uterosacral ligaments. The rectocele, when no lacerations exist, is in this manner lessened.

The uterus should be curetted as the first step in any of these operations.

The adhesions so frequently found in these cases are of the greatest value to the patient in that they fulfil a munificent purpose of nature in preventing the condition of complete prolapse during the existence of the malposition.

Puerperal Sepsis.

J. H. Burtenshaw (*New York Medical Journal*, Oct. 24, 1903) at the recent meeting of the New York State Medical Association read a paper under this title. He said that in no essential way did puerperal infection differ in its nature or onset from sepsis following a surgical operation. Reduced to few words, the treatment should aim (1) to remove the source of infection; (2) to neutralize the effects of the septic germs or of their toxins; (3) to support the patient's vitality. He believes curetting of the septic uterus with a sharp instrument to be unjustifiable, but recommends that retained secundines be removed by means of a finger, or under certain circumstances, with a dull wire curette. Every care should be taken not to wound the endometrium. Lacerations of the cervix and vagina should be cauterized. The cavity of the uterus should then be irrigated with two gallons or more of warm salt solution, or one-per-cent lysol solution. Both cavities should then be packed with ten-per-cent iodoform gauze. He has never obtained as satisfactory results from the use of vaginal or uterine tampons soaked in formalin or alcohol. He does not favor continuous irrigation of the uterine cavity in cases of infection, as the pathogenic organisms are lodged beyond the granulation wall. In sapremia such irrigation might be of benefit. He does not approve of hysterectomy in these cases, as if operation is performed sufficiently early to insure a good result, one can never be certain that the operation is absolutely necessary. To neutralize the effects of the germ invasion he believes in promoting bowel and kidney functions to begin with. The administration of antistreptococcic serum has been disappointing, as has the intravenous use of formalin solution. Opening and packing of the posterior cul-de-sac with iodoform gauze is commended. Considerable stress is laid on the good effects obtained

from the use of normal salt solution. It is still a moot question as to the manner in which the solution exerts a favorable influence, but the term *lavage du sang* would appear to be particularly significant in this connection. With the use of unguentum Credé and collargolum the speaker's experience has been limited.

To support the patient's vitality Burtenshaw advises that her diet be nutritious to the last degree, but of such a nature that the tax put upon the digestive system shall be reduced to a minimum. He believes strongly in the administration of brandy or whiskey in liberal doses, not only for their stimulating effects, but as a food. Ergot, strychnine, and quinine are always indicated.

The Etiology and Pathology of Salpingitis.

E. J. Ill (*Philadelphia Medical Journal*, Nov. 7, 1903) says that all forms are due probably to the invasion of pathogenic germs, although cold douches and other exposures to cold, especially during menstruation, act unfavorably, as well as the invasion of the tube by carbolic acid or hydrogen peroxide. The colon bacillus and the tubercle bacillus are among the most troublesome bacilli, but gonorrhea is the most common cause; it grows on the surface of the tube, and also penetrates and sets up a peritonitis. The streptococci and staphylococci are the most active among the germs, and intestinal disease, typhoid ulcer, appendicitis, and tuberculosis act through the blood and through operative interference. The pathological signs are those of inflammation, together with desquamation of the epithelium. Pus can be squeezed out of the end of the tube, or the end may close up, and the fimbriated end may choke up and its fibers adhere. The uterine end closes too, but rarely. The lining of the tube is often fairly well preserved. That complete restoration is possible is proved by subsequent pregnancies. The finale might be a hypertrophic condition or an atrophy to a mere corkscrew-like appearance, or hyaline degeneration. It is possible that some cases are not bacterial in origin.

The Repair of Lacerations of the Cervix Uteri—An Investigation as to the Proper Time for Operation.

D. H. Craig (*Journal of the American Medical Association*, Oct. 31, 1903) says that immediate repair of the cervix is indi-

cated only in exceptional cases aside from the control of hemorrhage.

Mediate repair (during continuance of lochia) is contraindicated except it be in some unusual case.

Secondary repair is indicated as soon as symptoms are definitely due to the laceration, such symptoms failing of relief by palliative measures or recurring after apparent palliative cure. Operation should be prompt, not necessarily early.

Operations on women past thirty-five give better permanent results than in younger women.

Repair of the cervix is indicated as prophylactic of malignancy in a woman approaching the cancer age if the cervix manifests locally evidence of cellular irritation, whether or not causing subjective symptoms.

Lacerations in which operation is not indicated should be kept under close observation as the cancer age approaches.

Obstetricians are obviously unable to avoid lacerations of the cervix in many cases, but if the above deductions are correct a far more strict asepsis will, by favoring spontaneous primary union of such lacerations, do much toward lessening the number of secondary tracheloplastic operations.

Relation of Fetus to Nephritis of Pregnancy.

D. Klein (*Monats. f. Gct. u. Gyn.*, August, 1903) reported before the Obstetrical Society of Cologne in March a case of severe nephritis gravidarum in a woman aged forty-seven.

The urine contained 10 per cent albumin. The fetus died; then the patient's general condition improved, and the excretion of albumin diminished. At the end of ten days hardly a trace of albumin could be detected; fourteen days later, or twenty-four days after the death of the fetus, it was expelled, putrid and much macerated. Ten days afterward the patient's urine was quite free from albumin. Klein considers that this case proves that it is only the living fetus that can produce a material which when absorbed by the mother can prove prejudicial to the kidneys.

THE MEDICAL AGE

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ORIGINAL CONTRIBUTIONS.

TUBERCULOSIS OF THE BRAIN AND ITS MENINGES.

BY E. G. WOOD, M.D., NASHVILLE, TENN.

Considering the prevalence and chronicity of tuberculosis of the lungs, it is remarkable that the process is relatively so infrequent in the brain and meninges. The infrequency with which the brain and its membranes are involved in pulmonary tuberculosis is all the more striking when one considers that the great majority of cases of cerebral and meningeal tuberculosis are met with in children who present no manifest sign of tuberculous disease in the lungs, and in whom the primary lesion is often latent and perhaps only discovered after a most searching necropsy. The latency of the primary focus, the difficulties which surround an early diagnosis, and the fatal nature of tuberculosis of the brain and its membranes render a knowledge of its pathology and symptoms of the highest importance to the practitioner. With the limited time at my disposal only a very brief outline of tuberculosis as met with in the brain and its membranes is possible.

1. *Tuberculosis of the Brain.*—Like tuberculous meningitis, tuberculosis of the brain is most common in children, but it may occur at any age. In the vast majority of cases it is secondary to a tuberculous focus elsewhere, but cases of primary disease of the brain have been recorded.

In the brain tuberculosis takes the form of tuberculous nodules or tumors, varying in size from a short to a small orange. These tumors may be single, but in most cases there are two or more. They are said by Gowers to be most frequent in the cerebellum, next in the cerebrum, and less so in the pons and basal ganglia. The tumor is firm, but yellow and caseous in the center, sometimes calcified; it is not purulent. It is circumscribed and does not infiltrate the surrounding tissue, which in its immediate

vicinity is often softened and translucent. In many cases there is a localized chronic tuberculous leptomeningitis directly over the mass.

The symptoms of a tuberculous mass in the brain are those of cerebral tumor, occurring probably in a patient who has evident tuberculosis elsewhere. In many cases, however, there is no manifest evidence of the primary focus in the lungs, glands, bones, etc., and the disease appears in an apparently healthy individual. Should the mass be situated in the "silent regions" of the brain, it may be quite latent until it has reached a considerable size. In a case I saw three years ago a child of seven years of age was apparently in perfect health until it fell off a swing. In a few hours the child became partially unconscious and developed weakness of the right side of the body. It died comatose one week later, and at the necropsy a tuberculous tumor, larger than a walnut, was found in the right lobe of the cerebellum, with acute tubercular meningitis.

2. *Tuberculous Meningitis.*—Tubercular meningitis or acute hydrocephalus is much more frequently met with than tuberculosis of the brain itself. It is most common between the ages of one and five years. Under one year it is comparatively rare, and but few instances have been met with under three months. After five it becomes progressively less frequent, but it is by no means uncommon to meet with it in early adult life. A family history of tuberculosis is present in about half the cases, which is the same proportion in which it can be obtained in tuberculous disease of other organs. There is no particular habit of body that predisposes to tubercular meningitis, and though in the majority of cases the patients have been weak and feeble for some time before the attack, the disease is frequently met with in robust, well nourished chidren. Injury to the head is often assigned as a cause.

It is doubtful if tuberculous meningitis ever occurs as a primary disease. In the cases reported it is more than likely that the tuberculous focus in some other part of the body has been overlooked in the examination. The original lesion may be a localized caseous nodule in almost any part of the body, as the lungs, glands, bones, joints, generative organs, or skin. In a large percentage of cases the primary lesion will be found in the bronchial glands, no clinical manifestations, however, having been observed during life. The tubercle bacilli find their way to the brain either through the lymphatics, or, much more commonly, through the blood-vessels.

Morbid Anatomy.—In tubercular meningitis changes are

observed in the pia mater, the lateral ventricles, and the brain substance.

In the pia inflammatory changes are seen over the base, more especially about the optic chiasm, in the interpeduncular space, and frequently along the Sylvian fissure. Occasionally the process extends to the adjacent contiguous surfaces of the cerebrum and cerebellum, and rarely along the fissures of Rolando, to the vertex, and to the two surfaces of the superior longitudinal fissure. Over the base, especially at the points mentioned, the pia-arachnoid is thickened, opaque, and matted together. Contiguous surfaces are sticky or glued together by the exudate. In many cases there is a greenish or grayish-white fibrinopurulent exudation. By careful examination one may see numerous small white dots on the blood-vessels—the miliary tubercules. These little tubercles are not only found on the surface and between the fissures, but often on the vessels of the anterior and posterior perforated spaces and in the choroid plexuses of the lateral ventricles.

The lateral ventricles are usually distended with a more or less turbid fluid; sometimes the distention is so great as to produce flattening of the convolutions.

The brain substance is in many cases soft and infiltrated with leucocytes. This is probably in part due to pressure and maceration by the distended ventricles, but as it occurs in cases with no dilatation of these cavities it is doubtless often the result of thrombosis from tuberculous endarteritis. These changes in the cerebral substance have led to the modern name for the disease, meningoencephalitis. Though in the majority of cases the changes are quite distinct to the naked eye, it is surprising to find in some instances how slight a departure there is from the normal, and in such cases it is difficult to explain the fatal termination. In many cases the spinal cord is also affected either in its substance or its membranes. In addition to the changes in the nervous system search should be made for the primary lesion, which in children is very frequently found in some of the lymphatic glands.

Symptoms.—The onset of the disease may be insidious or abrupt. Prodromal symptoms are present in the majority of cases. Usually the child has been out of health for some weeks or months before the disease definitely asserts itself. It has been peevish, irritable, and at times apathetic. It is restless at night, tosses and starts in its sleep, and grinds its teeth. Gastro-intestinal irregularities are common, and the patient becomes

anemic and loses flesh. There may or may not be slight fever. The mother often attributes these symptoms to worms. In not a few cases premonitory symptoms are absent, and the disease appears suddenly during apparent perfect health.

Even after the definite onset of the attack the symptoms are often variable and indefinite, and though the disease is usually divided into the three stages of irritation, compression, and paralysis, it is in many cases not only impossible to adhere clinically to this classification, but it may be impossible to make a diagnosis before the late symptoms have appeared. In children the disease is usually ushered in by some well marked symptom, which in itself is by no means characteristic of the disease. In secondary cases in adults the onset is often insidious, and no suspicion of the cerebral complications is aroused until some brain symptoms are observed.

Symptoms of Onset.—(1) Vomiting is seldom absent and may be the first symptom. It may continue for a few days only or recur in the late stage of the disease. It is usually cerebral in type, the contents of the stomach being regurgitated without retching. (2) Headache is rarely absent. It may be slight, and only evidenced by the child constantly raising its hands to its head or rolling its head on the pillow; on the other hand, it may be intense. The peculiar "hydrocephalic cry" is probably often caused by sudden exacerbations of pain. The headache usually continues until the child becomes dull and stupid. (3) Fever is sometimes the only symptom noticed at first. It is usually moderate, 101° to 103°, and in not a few cases the temperature is but slightly elevated. In fact a high temperature is rather against tuberculous meningitis. As the case progresses the fever often subsides, so that in the later stages the temperature may be normal or subnormal. (4) Convulsions are not common, but occasionally they occur as the first symptom. (5) Delirium is sometimes the first symptom in older children and adults, but as a rule it is a later manifestation.

Of these initial symptoms the first three are not only the most common, but in most instances all three are present from the first. For a variable time after the onset, in many cases, no definite symptoms of brain disease can be seen. This so-called "period of indecision" is characterized by a continuance of the headache, by gastrointestinal disturbance, fever which may be slight or disappear, restlessness and wakefulness, general hyperesthesia, and changes in the pulse. General hyperesthesia especially noticed on handling the child is often an early symptom, and one

of considerable diagnostic importance when associated with other symptoms. The tache cerebrale is present early, but is not diagnostic. The pulse, even early, often presents characteristic changes. It may be irregular in force or rhythm, but the most significant features are its comparatively slow rate and the variations in the speed with successive half-minutes. In the later stages it usually becomes regular and very rapid. Muscular twitchings are sometimes seen in this early period. There is often photophobia, and the pupils as a rule contracted. The child in most cases lies on its side with its knees and elbows flexed, its abdomen retracted, and it resents interference. Movements of the mouth and jaws as in sucking, working the jaws, and grinding the teeth are often observed, or the child is constantly picking at its lips or genitals. There may be stiffness of the neck and retraction of the head, but as a rule it is not a marked feature in this form of meningitis.

Last Stage.—After a variable period of a few days to two weeks or more, characteristic symptoms of the disease appear. They may be divided into (1) general symptoms; (2) brain symptoms; (3) ophthalmoscopic signs.

1. *General Symptoms.*—There is more or less complete anorexia, constipation is obstinate, and the child begins to waste. The temperature is usually but slightly elevated and may be subnormal, but often rises to 104° or higher just before death; the pulse is slow, often irregular and intermittent; toward the end it becomes rapid and usually regular. The respiration becomes irregular and may present the Cheyne-Stokes rhythm.

2. *Brain Symptoms.*—Muscular twitchings and rigidities, with contraction and flexion of the limbs, may appear early, but are usually well marked in the later stages. The characteristic decubitus has already been referred to. Various palsies may appear. There may be paresis of some of the ocular muscles with strabismus or ptosis, paresis of one side of the face or hemiplegia, or paresis of an arm or a leg, or of both legs, or a crossed paralysis. The pupils are now usually dilated and may be unequal. Nystagmus is not uncommon. The child grows more and more delirious, apathetic, consciousness is gradually lost and finally gives way to coma, which may be preceded or accompanied by local or general convulsions. Kernig's sign is usually present.

3. *Ophthalmoscopic Signs.*—Two changes may be discovered by the ophthalmoscope: (1) optic neuritis, which is usually a late manifestation, and signifies only the probable presence of some intracranial lesions; (2) choroidal tubercles. Tubercles on the choroid are present in a small percentage of cases only and

have only been found late in the disease. When present they furnish practically conclusive evidence either of intracranial or general tuberculosis, and most likely the former.

Diagnosis.—As a rule there is but little difficulty in recognizing tubercular meningitis if, when first seen, the case presents one or more distinctive brain symptoms following a history of acute illness characterized by the symptoms already outlined as most common in the early stage. The diagnosis of the disease, however, in the early stage may be impossible. In fact, in secondary cases occurring during the course of active tuberculosis elsewhere, as in the lungs, as a rule the presence of the disease is not even suspected until definite brain symptoms set in. In very many cases, if not in the majority, even in children, the disease is not recognized until days or even weeks have elapsed after the appearance of the initial symptoms. Many cases are for some time looked upon as either gastrointestinal attacks or typhoid fever, or some ear disease, while on the other hand the nervous symptoms of the early period of typhoid fever may be of such a character as to point to meningitis. The symptoms of the greatest diagnostic importance in the early stages are the known presence of a tuberculous lesion at some other point, a history of premonitory symptoms of failing health, with restlessness, sleeplessness, etc., followed by a definite onset characterized by headache, vomiting, and fever, with perhaps convulsions. After the onset the most significant symptoms are the attitude of the patient in bed, the constant putting of the hands to the head, the hydrocephalic cry, the wakefulness, and starting in sleep. In addition to these the general hyperesthesia, the comparatively low temperature, and the peculiar irregularity of the pulse are of the very greatest importance in diagnosis, so much so that any one of them should at least draw one's attention to the possibility of tubercular meningitis.

In obviously secondary cases of tubercular meningitis in adults the onset is often so insidious that the presence of the disease is not suspected until definite brain symptoms force themselves upon us, or until the necropsy reveals it.

In such cases the earliest symptoms are often mental, such as slight mental obfuscations, stupor, or delirium, which may resemble delirium tremens. Speech defects may first draw one's attention, or an ocular palsy.

Lumbar puncture may be of service. The presence of tubercle bacilli in the fluid, which is usually turbid, would be conclusive. It is stated that a sterile fluid is in favor of the tuberculous nature of the process.

A BRIEF ANTHROPOLOGICAL STUDY IN COLOR.

BY Q. W. HUNTER, M.D., LOUISVILLE. KENTUCKY.

The student of medicine necessarily being in greater or less degree interested in collateral sciences (anthropology included) is by the writer considered sufficient apology for the rather ambiguous superscription to this contribution of inquiry.

Why is there such wide variation in the complexion of Caucasians? Why are negroid races black, Indian reddish-brown, Mongolian yellowish-brown, etc.? These are frequent queries put to scientific students, to which the physician promptly replies that the complexion of an individual depends solely upon the color of the pigment in the Malpighian layer of the skin. But the real meat of the proposition, which remains unanswered, is—to what may be attributed the supposed variation in shade of the Malpighian substance; why should it apparently be colorless (opaque) in the Caucasian, inky-black in the pure Negroid races, and brownish-yellow or red in others?

No adequate explanation of the variation in degree of color has ever been suggested, so far as the writer is able to ascertain, nor can he discover anything in ancient or modern scientific literature to clearly elucidate the mystery. Therefore it seems fair to state that the problem is unsolvable, or at least that it remains unsolved. Moreover, little or no investigation appears to have been undertaken in this direction in recent years. Some of the older writers on anthropology and kindred subjects* attempted to explain the mystery of color, and advanced numerous theories to account for the variety of shades in different races of people; but in this, as in many other physioanatomical intricacies, the explanations offered appear to fall far short of full and complete elucidation.

One of the older authors in enumerating the chief points in which the negro either approaches the Quadrumana or differs most from his own congeners makes the following statements: "Complexion deep brown or blackish, and in some cases even distinctly black, due not to any special pigment, as is often supposed, but merely to the greater abundance of the coloring matter in the Malpighian mucous membrane between the inner or true skin and the epidermis or scarf skin."

**Vide* the writings of Darwin, Masson, LeCat, Melloni, Desains, Buffon, D'Orbigny, Orgeas, *et al.*

It is also noteworthy that the dark color seems to depend neither on geographical position, the isothermals of greatest heat, nor even altogether on racial purity. The extremes of the chromatic scale are found in juxtaposition throughout the whole negro domain, in Senegambia, the Gaboon, upper Nile basin, lower Congo, Shari valley, Mozambique. In the last region Froberville determined the presence of thirty-one different shades, from dusky or yellow-brown to sooty-black. Some of the sub-negroid and mixed races, such as many Abyssinians, Gallas, Joloffs, and Mandingoes, are quite as black as the darkest full-blooded negro. A general similarity in the outward conditions of soil, atmosphere, climate, food charged with an excess of carbon, such as the fruit of the butter-tree, and other undetermined causes, have tended to develop a tendency toward dark shades everywhere in the negro domain apart from the bias mainly due to an original strain of black blood. Even the African Arabs are described by Burckhardt, De Pages, and other observers as often decidedly black. Waddington mentions more particularly the Shegya Arabs south of Dongola, on the White Nile, as distinguished by their clear, glossy, jet-black. The same expression "jet-black" is applied by Schweinfurth to the Upper Nilotic Shilluks, Nuers, and Dinkas, while the neighboring Bongos and Mittus are described as of a red-brown color, like the soil upon which they reside.*

Another important query is suggested in this connection, viz.: Why is the color of offspring of the dark races lighter at birth than later in their development, and by what influence is the color of the pigment changed after birth? There appears sufficient evidence to prove that, except for the scrotum (especially the scrotal raphe), the new-born negro baby is of a creamy (yellowish) color and does not become black like its progenitors until later in its development. It has been contended by some authors that the new-born negro baby is of a delicate pink color; by others that it is distinctly black; that at no time from birth to dissolution is the skin of the negro anything but black unless by destruction of the pigment, the result of disease, as sometimes happens, his color is changed. Farabery is accredited with the statement that the negro baby at the time of its birth is exactly the same color as its white brother, and it shows signs of color only after an interval, usually of several days, but often extending to many weeks. Claiborne declares that he has practiced medicine forty-

*Heart of Africa, vol. i, p. 261.

eight years in the Black Belt of Virginia, and has seen thousands of negro babies, but has yet to see a white one; he would as soon expect to see a white crow. In the opinion of the writer, whose opportunity for observation in this direction has been considerable, both these hypotheses are erroneous; it is believed facts prove that offspring of full-blooded negro parents is creamy-yellow when born, gradually becoming darker, reaching the maximum or normal standard of color within six months to two years. The writer is not unmindful of the fact that the general term "negro" is used to denote devious shades of color from light-yellow to jet-black, but it matters not what may be the degree of adulteration of negro blood, the statement applies with equal force that the negro baby at the time of its birth is lighter in color than normal, except for the genitals, as already indicated.

The theory has been advanced that deviation in shade depends not upon the color of the Malpighian substance but the quantity thereof, and upon diet, habitat, exposure to the rays of the sun, etc., etc. This is another theory which the writer believes to be not borne out by facts; although he is reminded that among full-bloods in the same locality many shades of color are to be found, the explanation of these phenomena has yet to be discovered and developed. Where admixture of the blood of the negroid and any of the white races has taken place, it naturally follows that there will be deviation in shade, and the explanation is therefore easy.

As has been pointed out by Robertson,* the offspring of a white or light mulatto mother and a full-blooded negro father will almost invariably be black or extremely dark, whereas the converse is true in the offspring of a black mother and white father, and this suggests another anthropological query which has never been satisfactorily elucidated. There is abundant evidence to prove the assertion that the offspring of a black father and a white mother will be black, and *vice versa*. The writer recalls an instance where the daughter of a prominent Southern gentleman gave birth to a still-born black baby. She was accused of having had sexual intercourse with a negro, which was strenuously denied, but subsequent investigations revealed the fact that a negro (servant) had entered her bedchamber one night, and she had accepted his sexual embrace, believing him to be her lover, who had been accustomed to do likewise. Instances are too numerous to mention where full-blooded negro women have

*Pediatrics.

given birth to light-yellow offspring, the fathers thereof being white men. Of course, the greater the admixture of "white blood" the lighter will be the offspring as a general rule, but there are numerous exceptions—*e.g.*, the writer is aware of instances where black children have been born of light-yellow (mulatto) parents. In one case where a mulatto married a white woman a similar condition was observed, as evidenced by the appended report: A light-yellow negro (mulatto) from Alabama went north, where he was thereafter known as a white man. In the course of time he married a white girl without divulging the fact that negro blood coursed through his veins. The first child born of this union had dark-brown skin, flat nose, woolly hair, and other characteristics of the negro race. The second child was very light in color and possessed none of the features or other characteristics of the negro. The couple eventually had six children (all males), three of whom bore distinct evidences of the admixture of negro blood, the other three being very light in color and having the distinctive features of the Caucasian.

In studying this question it appears equally as difficult to adequately explain the variation in color of the different races as to explain other peculiar racial characteristics—*e.g.*, the prominent cheek-bones and coarse black hair of the Indian; the queerly shaped head and obliquely set eyes of the Mongolian; the flat nose and black woolly hair of the negro, etc. Observation proves the existence of these peculiarities, but, like variations in color, the reasons therefor are not apparent.

In the animal kingdom may be noted similar characteristics and differences demanding explanation, but of these no more need be said, as this address is intended to deal only with the genus *homo*.

THE CARD AND ENVELOPE SYSTEM OF RECORDS.

BY A. L. BENEDICT, M.D., BUFFALO.

The physician who wishes, after some years of practice, under present sanitary and social conditions, to speak with a clear conscience of his thousands of cases of vaccination, hundreds of cases of typhoid, of his immense experience with diphtheria or labor without a death, had better rely upon his memory and keep no case records. But the man who is interested, in advance, in having careful and correct statistics of his practice should start right by noting his cases in an orderly manner.

As a basis of all such statistics, nothing seems to me superior to the ordinary visiting lists, but it is important to enter the full names and addresses of all patients, to indicate family relationships, to refer to the maiden name of female patients who marry, and to indicate occupation or otherwise to distinguish the identity of persons with similar names. In looking back over my personal experience, it has been a surprise to find that the liability to confusion has not occurred with regard to the Smiths and Joneses, but as to such names as Sautter and Sauter, Ott and Otts, Arthur Brown and Arthur Braun.

It is scarcely worth while to keep full records of uninteresting cases, although a memorandum of the exact diagnosis should always be made, and, in general practice, preferably in the weekly or monthly visiting list, as the same patient will probably be treated for very different ailments at different times. In quite a number of instances this is true even for special practice. Dr. Jung, of Washington, has written a most interesting article on the heredity of digestive diseases. While I have never encountered many instances of even apparent heredity, some rather remarkable familial coincidences have occurred. For instance, patient No. 31, 1896-7, died in 1896 of hepatic sclerosis and other visceral lesions. His wife, No. 49 of same fiscal year, died a few months later of cancer of the cardia. Their three daughters have had typhoid, typhlitis, movable kidney, chronic constipation, esophageal spasmodic obstruction, and various functional gastric troubles among them, and I believe that, without going farther from my province than to advise a spray for the throat, I have had the exclusive medical charge of this family for seven years, except for two labors and correction of refractive errors.

With the visiting list as a basis, a card index of names is very convenient. This index bears the patient's full name and a serial number, which according to the method I prefer is never changed. At the beginning of each fiscal year the first patient never seen before is numbered 1, etc. Recurrent patients retain their original number. For instance, Patient No. 20 of 1889-90 has been seen in 1892, 1894, 1896, 1897, 1898, 1899, 1900, 1901, and 1902. On account of probable change of residence, most of the cards in my general index bear nothing but the name, number, and an index of visiting lists, with a vertical red line opposite a yearly reference to indicate that the account has been settled in full, a blue line to indicate an account closed by discount or as a matter of charity, or the initials "D. B." to indicate that the account is hopeless. A card index of this kind, by facilitating reference,

multiplies the occasional instances in which one has the pleasure of erasing the "D. B" and drawing a red line. Occasionally a note is placed on the card to complete the identification, as when a man's wife and sister have the same name, or when doubt would exist for other reasons. Many of my cards are marked "Env." in the southeast corner, indicating that the medical notes of the cases are to be found in a special envelope file.

Beside the general card index, I keep four other partial card indexes, one for open accounts of patients who do not pay within the month of the visiting list record, one by names of places for out-of-town patients, one by names of physicians of consultation and reference patients, and one by names of diseases of interesting cases which deserve reporting in series. A physician in general practice would scarcely need the second and third, but, using the general index as a basis, any classification desired can be made in a separate alphabetic arrangement.

The envelope system for scientific notes is far more satisfactory than the use of a case book, however well indexed. The envelopes of patients actually under treatment are kept in any convenient alphabetic file on the desk. As I do not make envelope records for trivial cases nor for death-bed consultations, unless the case is especially interesting, this active file is usually kept within the limits of thirty and seventy, but it would obviously vary greatly according to the nature and extent of one's practice.

At convenient intervals, envelope records finished by death, discharge, etc., are filed in shallow boxes divided by alphabet cards, so that reference can be quickly made to any history desired. Young practitioners should bear in mind that there are few things more satisfactory to a patient than to discover that, after a period of a year or more, the physician can immediately put his hands upon a full history of his previous trouble. I am especially interested in a number of observations covering a period of seven or eight years, in which accurate records have been kept of the areas of organs noted by auscultatory percussion, *x*-ray examinations, etc. The uniformity or the gradual and consistent changes thus recorded seem to me to be valuable evidence of the reliability of these methods of physical examination.

Various blanks have been published which are a maze of dotted lines, M's for Mr., Mrs., and Miss, and oblongs for noting all sorts of details. My own experience corresponds with that of many others, that the less one has printed on envelopes and cards the better. A regular order should, however, be followed in all cases, so far as practicable, and if necessary sample cards

and envelopes should be kept for reference, although one soon becomes accustomed to following a regular order. The following is suggested as a model for the envelope:

MRS. ELVIRA C. JONES,
RED MILL, PA.
(Gainsborough Hotel, Buffalo.)
Tel. Frontier 20156.

March 8/03.
(1902-3, No. 519).
56, M., U. S. (Eng.-Scotch-Dutch), Housewife.
6 children, 16 to 32 years.
1 miscarriage, 3d month.
Referred to Dr. F. C. Griswold.
Rt. kidney 3d degree.
M. R. and cardiac dilatation.
Gastroptosis.
Hyperchlorhydria.
Simple anemia.
Death October, 1903. D. C.

Inside the envelope the detailed history is kept on slips of paper, one or more being used according to the length of the treatment. Notes of urinary and gastric analyses, etc., are usually kept on these slips; correspondence regarding the case, necropsy records, further reports by the family physician, etc., may simply be enclosed without copying. The history slips which I use are stamped with a diagram of the thorax, neck, and abdomen. Gynecologists, general surgeons, ophthalmologists, and other specialists would obviously require other stamps, but the graphic method of recording the results of physical examination is much superior to the verbal description. It will be noted that I try to get the ultimate ancestry of each patient, as I agree most heartily with the Irishman's criticism of the ordinary use of the word American: "And if the owld cat had kittens in the oven, would yees call thim biscuits?"

The diagnosis in my work is seldom reducible to one term, and often no exact diagnosis is possible, although one may feel that the interrogation as to each point of the condition has been satisfactorily answered. It is of interest to note the source of each patient, even when referred by another patient, when due to "general reputation," family or club acquaintance, or, especially in general practice, when due to accident. In my personal records no listing is made of charity cases, or of nurses, physicians, and physicians' wives and children. Such patients would, therefore,

bear no year and case number. The initials D. C. indicate that the case has been listed on the cards arranged according to diagnosis.

The date on the envelope refers to the beginning of observation. It does not necessarily coincide with the date of first listing of the patient, as the condition at that time may not have necessitated a careful record. When a patient reappears after a considerable interval and on account of a distinct trouble, a line may be drawn across the envelope, and the new diagnosis and other details may be placed below. This is rather more convenient for me than to make out a separate envelope, but is obviously a minor matter to be decided according to individual preference.

Many physicians prefer to count a recurrent patient as a new case. This method multiplies cards and prevents ready reference to past history of a case. I remember being much surprised at the enormous practice of a friend who had graduated comparatively recently, till on questioning I learned that he not only followed this plan, but included charity cases, insurance examinations, contract work, etc. According to the single entry method suggested, one card for each case will be ample for a lifetime of practice, so far as the general index is concerned. The cards for business accounts need not be saved after the accounts are balanced. The diagnosis cards may, of course, list the same individual a number of times, especially in general practice. In the consultation file one card will suffice for fifteen to twenty different patients referred by the same physician, and it is only occasionally that two or more cards are required. As a matter of convenience, dead patients may be separated from the living in the index, though in most practices one will be ignorant of the ultimate fate of many patients. On account of the liability of misplacing cards, it is not usually advisable to follow the "Ba-Be-Bi-Bo-Bu-By" system of arrangement, nor to attempt to adhere rigorously to an alphabetic arrangement except for the initial letter of a name. In case of change of name, as by marriage, it is well to add a card bearing the newer name and merely referring to the original.

It will, of course, be understood that the details of a card system must be determined according to individual needs. But the wonderful compactness and elasticity of the system render it far superior to any book method. Some physicians are doubtless deterred by the relatively high expense of the ready-made, elaborate card files, especially those in which the blank cards are specially printed according to a personal scheme. For most pur-

poses I prefer perfectly blank cards, and do not use those with slots or holes for rods, as cards thus prepared are not readily rearranged or removed for additions and corrections. It will often be found not only economic but more convenient to place partitions in the drawers already available in a desk, and to have the cards cut to fit. For ordinary index and account purposes, 4½x3 inches is a convenient size for cards, though it would be better to use much larger ones if it is intended to combine the index with the records themselves. This combined method is undesirable unless, as for insurance examinations, refractions, etc., the records are brief and patients are not under continuous observation. When it is occasionally desirable to attach a brief memorandum to the index card, the reverse side may be used or a second card may be fastened on with a clip. Each hundred cards will require about one and a half inches of longitudinal space. At the beginning even a rather deep cigar box may be used to hold the cards.

A VERY important lesson, says the *Journal of the American Medical Association,* is drawn by the *Deutsche med. Wochenschrift* from a recent sensational affair in Germany, urging the necessity for medical oversight of the children of wealthy parents. The two sons of a prominent Berlin banker were entrusted to a private tutor, who lived on a country estate or in the little town of Bayreuth with them while the parents were traveling or at home in Berlin. No one except the tutor was responsible for the lads, and their mental training seemed to be the only care of the parents. The tutor proved to be a typical case of extreme sadism, and during the months the boys were under his charge maltreated them to such an extent that one has since died. If some local physician in the country town had been written to and requested to look after the children at brief intervals this terrible catastrophe might have been averted. Our exchange adds a warning to all parents, and especially to those of the upper ten thousand, to regard the health of their children as their most precious treasure, and not to leave the care of their physical welfare entirely in the hands of outside persons, no matter how "ideally" they may seem fitted for the task. In the case mentioned a number of extraordinary circumstances combined to keep the boys in their slavery and prevent its reaching the ears of the parents, who apparently regarded the boys' health and happiness as "neglectable quantities." The tutor has been sent to the penitentiary for eight years.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE EUPHORIA OF SPEED.

There is undoubtedly deeply implanted in the human organism a love of rapid locomotion which must find its sources of origin in some far-distant experience in the race. Darwin long ago pointed out that the pallid face, the panting breath, the rapid heart, and the protruding eyeballs are the phenomena which compose the emotional picture of fear, and that these are exactly the effects which would actually proceed from being chased by enemies or by wild animals. There is, however, another side to this picture, the emotional expression not of the chased but of the chaser. The rapid pulse, the full, eager eye, the excited flush may also be expressive of the more exhilarating emotion of pursuing rather than of being pursued. However it be, we can readily conceive there may be a psychosis having lines of origin in the primitive occupation of the pursuit of victims, quite as much as there be a psychosis founded on vestigial emotions of fear.

Hartenberg in an article (*Archives de Neurologie,* vol. xv, No. 89) entitled "New Observations on the Neurosis of Anguish" cites among other interesting cases that of a patient in whom night and occasionally day terrors were evidently produced by automobiling. After three days of touring he finds himself greatly indisposed, his teeth chatter, he shivers, has violent beating of the heart, and is assailed with sudden fear of death. This experience was repeated so frequently that physicians ordered him to desist from the sport.

Reported in the same journal is a discussion upon the psychology of speed. Hachet-Louplet says that whoever is in a situation to increase at will his speed is entirely carried away by the intense impressions which he experiences; he loses self-mas-

tery; he is intoxicated; there are born in him feelings which he has not in a normal state—pride, combativeness, anger, hatred, spitefulness, violence. The high rate of speed creates the same state of mind which makes the habitual drinker of alcohol regardless of consequences. Berillon considered that there was an analogy between the euphoria of speed and that of morphine. Those who allow themselves to be carried away with speed-making for its own sake are most often degenerates lacking in self-control.

Lux stated that he had been a witness in Algeria of Arab fantasies. They are demi-fools, intoxicated by the dust, transported by a semi-fury; their euphoria resembles that of automobilists.

Dr. Forbes Winslow expresses the opinion that the racing motor has outdistanced the powers of the man who drives it, and cites the new disease "motor intoxication," as discovered and described by the Paris savants.

These suggestions may possibly explain the psychological state of certain otherwhile staid individuals who seem to lose all sense of responsibility when driving motor carriages and by their reckless speeding jeopardize the lives of their fellow-men.

It is to be hoped, however, that police judges in trying offenders guilty of infraction of speed-limiting ordinances will not seek to relieve them of responsibility for their acts on account of this newly discovered psychosis.

EDITORIAL NOTES.

The Canteen Question.

The abolishment of the canteen at army posts a few years ago has undoubtedly led to a great deal of drunkenness among the enlisted men of our army. It was done away with by Congress in response to the efforts of a large number of enthusiastic but misguided individuals, whose aim was the betterment of the soldiers. In his recent annual report to the Secretary of War, Lieut.-Gen. Young says: "In view of the fact that Congress after a full presentation of the subject in the department's letter of January 8, 1903, failed to take any action by way of removing this restriction, I have some hesitation in again bringing this matter to the attention of the department. I do not feel at liberty,

however, to ignore a reform almost unanimously advocated by officers who have the best interests of the army at heart, and whose recommendations are entitled to consideration. Since the original establishment of the canteen feature of the post exchange there has never been a time when the dominant sentiment of the army did not approve that feature as tending strongly to promote morality, sobriety, and discipline among the troops."

It is sincerely to be hoped that the present Congress will restore this feature of army life, which is, as all army officers testify, one that helps to maintain discipline and order among our soldiers.

Suicide by Means of Typhoid Bacilli.

A short time ago a nurse in one of the municipal hospitals of Paris attempted suicide by swallowing the contents of two tubes of pure culture of the bacillus of typhoid. For a couple of days no symptoms were noticeable, but on the third day she had a slight rise in temperature and some headache. On the sixth day she felt heavy and stupid and experienced great weakness in her legs. The seventh day she had a temperature in the morning of 99.2°, and in the evening 100.4°. On the eighth day she had two attacks of epistaxis, and fever ran up to 104°. At this time the typical rose spots appeared on her abdomen. The tenth day the serum reaction was positive. From this time the fever followed its normal course, but owing to its severity she had to be given a large number of baths. It is doubtful if this method of suicide will ever become popular, owing to the length of time it takes to end one's existence.

Are Nursing Mothers Growing Scarce?

There was recently made at a meeting of a western medical association the statement that, at the present time, eleven out of twelve infants are raised on the bottle and patent foods, and that on the average only one mother in twelve was able to nurse her child. While it is impossible to say whether the percentage of bottle-fed infants is as great as this, yet the fact is indisputable that of late years there has been a growing tendency to bring up children in this manner. At the present time the mother who nurses her child is the exception. Many women unquestionably are unwilling, but more are unable. This doubtless results in the vast mortality of children born in our large cities. Babies thus

fed do not receive the food nature intended they should, and the substitutes are in many cases really poisonous. Notwithstanding the many advertisements for infant foods with which our journals teem claiming them as good as mother's milk, there never has been nor ever will be anything that can take the place of nature's food.

The Prophylactic Use of Diphtheria Antitoxin in Schoolchildren.

The proposition which was recently made by a speaker before the American Pediatric Society at its last meeting is one worthy of careful consideration by all members of the medical profession. In brief it was proposed to immunize young schoolchildren once or twice during the school year with diphtheria antitoxin and thereby lessen the mortality from primary diphtheria, scarlatina, and measles complicated with diphtheria. According to recent careful and unbiased investigations, the mortality in primary diphtheria has been reduced two-thirds, and the protective power of diphtheria antitoxin shown to extend over a period of from three to six weeks or more.

With so powerful an agent for good in our hands it would seem that, if this suggestion were properly carried out, the benefits derived would well repay for all the time, trouble, and expense incurred. Anything that will lessen the ravages of these diseases of child life ought to receive the support of our health boards and all those interested in the physical welfare of our schoolchildren.

The Harm Done by Quack Advertisements.

The harm done to young men by the indecent advertisements of medical charlatans is one of which the medical profession has long been cognizant. That individuals are sometimes driven to suicide by them is shown by a news item from Vienna, where a young man committed suicide last month. In a letter to his wife he stated that he had been driven to his end by the knowledge that the affection from which he was a sufferer entailed insanity in time. This information he had gained from the perusal of a quack publication. It seems impossible that this class of fakirs can be reached. There was passed only a short time ago a law by the Michigan legislature forbidding the insertion of indecent advertisements in the press of this State, yet up to date they continue to appear in just the same manner as ever.

ITEMS AND NOTES.

PLAGUE at Rio de Janeiro is reported to the extent of 29 deaths and 52 new cases, and 109 cases under treatment.

THE tenement inspectors of New York City have found over 325,000 occupied rooms which have neither light nor ventilation.

A TOTAL of $4530 was contributed in Boston this summer for the fund which supplies modified milk to the sick babies of the poor.

THE State Board of Health of Indiana has issued orders forbidding the reëmployment of 250 teachers in the public schools who are afflicted with tuberculosis.

THE Emperor of Germany had removed from his larynx, November 7, a small pea-sized growth, which according to the newspaper reports was probably a simple papilloma.

IT is reported that cholera has broken out at Bethlehem, and the town has been surrounded by a cordon of troops in the hope of preventing the invasion of Jerusalem by the disease.

THE cornerstone of King Edward the Seventh Consumption Sanatorium was laid November 3 at Midhurst, Sussex, Eng., by the king. One million dollars was given for this by Sir Ernest Cassel.

Archives Latines de Medicine et de Biologie is the title of a new trilingual monthly medical review, the first number of which was announced for publication on October 15. It will be published in French, Spanish, and Italian.

DR. W. ROYAL STOKES, city bacteriologist, in a recent address said that since the introduction of the public distribution of diphtheria antitoxin, the rate of mortality from this disease in Baltimore has fallen from 50 per cent in 1894 to 13 per cent at the present time.

FRANCIS M. FRENCH, aged sixty-four, has taken the State medical examinations which are being held at Syracuse. He is thought to be the oldest candidate who has ever appeared in this city. Mr. French was sixty years old when he was graduated from the University of Denver.

The next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga and amounting to about $180, will be made on July 14, 1904, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been presented.

The *Journal of Infectious Diseases* is the name of a new publication established in connection with the Memorial Institute for Infectious Diseases in Chicago. It will be devoted to the publication of original investigations dealing with the general phenomena, causation, and prevention of infectious diseases, both of known and of unknown origin.

Dr. Helene Friedericke Stelzner expresses her disapproval of Professor Stieda's proposal that there should be separate medical colleges for women. She believes that in such a case the women students would have to put up with inferior teachers and less opportunities for clinical study and practice, with the result that people would refuse to engage women doctors.

An unusual syphilitic lesion is recorded in the case of a pedestrian who was accidentally hit on the nose by the tip of a whip of a passing teamster. A typical chancre developed at the point of the slight excoriation, and investigation revealed that the teamster had syphilitic lesions in his mouth and was in the habit of nibbling his whiplash. This occurrence was reported by Dr. Melot in a French exchange.

Prof. Johan von Mikulicz-Radecki, lecturing at Breslau recently on his recent trip to the United States, said that he found more fruitful ideas among the American surgeons than among the French and English. He added: "The time is past when we were the givers and the Americans the receivers. The American character has as a fundamental feature unlimited self-confidence, and the American believes he can do anything he wishes."

Several physicians of St. Louis, Mo., are considering the expediency of establishing a dairy in that city for the sale of goat's milk, which is said to be immune from tuberculous qualities and to be easily digested. It is proposed to purchase a farm of 1000 acres in the Ozarks, and to stock it with goats procured from Switzerland, France, and Germany. The plan includes the leasing of goats to families, that milk may be had fresh every morning, and furnishing the animals free of charge to the indigent.

A Philadelphia grand jury has condemned the management of the Eastern Pennsylvania penitentiary and stated that the place is nothing more than a breeding-place for tuberculosis. The plumbing was found to be bad, requiring the constant use of disinfectants. The report further stated, says the *Medical Record*, that over 60 per cent of the deaths among the inmates of the penitentiary during the past thirty years have been from tuberculosis, and a bacteriological examination has demonstrated the presence of tubercle bacilli in nearly every one of the prison cells.

The population of the Island of Capri, says the *Medical Record*, is indignantly protesting against the plan of Professor von Behring to transform the villa which he bought from the family of the late Herr Krupp, the famous gunmaker of Essen, into a laboratory for the manufacture of antitoxin and a sanatorium for the treatment of people affected with tuberculosis. The people of Capri say that it would injure the reputation of the island, which depends for its revenues almost entirely on foreign visitors. They have interested several members of the Chamber of Deputies in their protest, and hope to be able to prevent the carrying out of Behring's project.

At the recent International Congress of Hygiene, the following resolution introduced by Dr. Patrick Manson was adopted: "In recognition of the practical importance of the 'mosquito-malaria theory,' the congress shall bring pressure upon all governments in malaria districts for the purpose of, first, causing an examination of civil and military officers as to a practical knowledge of this theory before employing them in such localities; secondly, of compelling the educational establishments in such districts to add instruction concerning the malaria theory and its practical applications; thirdly, to consider officers who know nothing of this theory or who systematically deny its practical application as unfit for service in malaria districts."

Dr. Otto Schmidt, of Cologne, according to the *Medical Record*, claims to have isolated the parasites of cancer, and says that all the alleged parasites of varied appearance described by Gaylord and others are only varieties of the same microörganism. He says he has obtained an effective antiserum, and has also been able to diagnose malignant diseases by means of a Widal reaction. The serum does not remove the growth, but takes from it its character of malignancy, and thus makes it possible for the surgeon to extirpate it without fear of recurrence. The dis-

coveries of Schmidt were recently described by Dr. Jesse Johnson in a paper read before the Abernethian Society of London, but were received with considerable skepticism by the members of the society.

THE Army Medical School began its seventh annual session November 3 with twenty-seven student officers in attendance. The faculty consists of the following officers: Col. Chas. Heizmann, president of the faculty and professor of military medicine; Major William H. Arthur, professor of duties of medical officers in peace and war; Major William C. Borden, professor of military surgery; Major Walter D. McGraw, professor of military hygiene and lecturer on tropical diseases; Major James D. Glennan, ophthalmology and optometry; Captain F. P. Reynolds, instructor in hospital corps drill and medical department administration; Captain C. R. Darnall, secretary of faculty, instructor in sanitary chemistry and operative surgery; Lieutenant James Carroll, professor of bacteriology and clinical microscopy; and Captain H. G. Trout, instructor in equitation.

THE National Board of Health at Buenos Ayres, says the *Journal of the American Medical Association,* was recently consulted by the courts in regard to a suit brought by a physician against an estate for services rendered. The physician in bringing the suit enumerated the particulars of his services and demanded remuneration for conducting a premature delivery, curetting, and after-care. The patient was an unmarried woman, and the affair had been conducted at her request with complete secrecy. The board of health materially reduced the amount to be paid, and severely censured the physician for his lack of professional secrecy in the matter. The death of the patient in the interim was no excuse for proclaiming the details of the services rendered. They also censured him for conducting such an operation without insisting on the presence of another medical man. The action of the board was modeled on Brouardel's maxims, which it cites from his work, "La Responsabilite Médicale."

AT the meeting of the Society of Medical Jurisprudence, held on the 12th of November at the Academy of Medicine, a paper was read by Justice Julius M. Mayer of the Court of Special Sessions on "Criminal Procedure against the Unlawful Practice of Medicine," of which the *Medical Record* gives the following synopsis: "The worst agency in New York to-day," said the writer, "that helps the man who sells either real or pretended

abortion medicine is the newspapers, for they make it possible to ensnare the unwary, the superstitious, and the fearful. I suggest that in the new school of journalism in Columbia there be a chair of advertising, and let it be taught to the young men of the newspaper profession that the first duty of a great newspaper is to censor its medical advertising. If the decent newspapers will assist in the gradual uplifting of public opinion concerning the men and women who engage in these disreputable and criminal occupations, it will be only a matter of a short time until they are driven out of business."

Consul Guenther reports, October 13, 1903, from Frankfort-on-the-Main as follows: The latest volume of the statistics of the German Empire contains a report with reference to the causes of mortality in German cities of more than 15,000 inhabitants for the period from 1877 to 1901. These cities had a population of 7.3 millions in 1877 and 17.5 millions in 1891. The total mortality per year during the five years from 1877 to 1881 for every 100,000 inhabitants was 2673, against 2046 in the five years from 1897 to 1901. This great decrease of mortality is a result of progress in many respects. Medicine, legislation and government, sewerage, water-works, sprinkling of streets, removal of garbage, more light and air through wider streets and parks, public bathing establishments, and playgrounds for children have improved the sanitary conditions in general, while the progress in medicine and chemistry, the antiseptic and aseptic treatment of wounds, the prevention of the spread of infectious and contagious diseases through disinfection, the serum of Behring, and the larger number of physicians and nurses in hospitals and sanatoriums, have increased the chances of recovery and given better protection against infection. The more stringent laws for the protection and health of working people and the inspection of nutriments have also contributed to the general result. The statistics, however, of death from acute intestinal diseases, inclusive of cholera infantum, are very unsatisfactory. In the mortality from this group of diseases no improvement is recorded; on the contrary, more persons died from this cause during the last five years than in any similar period since 1877. The reason for this greater mortality and smaller birth rate is to be found in the increased employment of women. The more women enter into remunerative employment the more are infants deprived of their best nutriment, mother's milk. For this reason more attention must be paid to the purity and quality of animal milk.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Indications for Operation on the Thyroid Gland in Graves's Disease.

L. W. Bacon (*Yale Medical Journal,* September, 1903) summarizes his paper as follows:

The two doctrines as to the pathogenesis of this disease are that of thyroid intoxication and that of primary affection of the sympathetic nerves and ganglia. The intoxication may be considered as that from mere hypersecretion and that from perverted secretion. In cases of the type of "thyroid intoxication by excess of secretions," operation on the thyroid is indicated in all cases of more than a few months' duration, in which the gravity of the symptoms warrants the exposure of the patient to an operation having a general mortality of about seven per cent, provided that the cases have not been decidedly benefited by reasonable non-surgical treatment or by surgical means addressed to other diseased organs. In cases of the type of "thyroid intoxication by perversion of secretion," the indication for operation on the thyroid is much less decided, and in many cases, especially those in which there are concomitant symptoms of myxedema, operation on the thyroid gland is contraindicated. In this class of cases the risk is greater and the chances of betterment by operation are less. In the two preceding classes of cases it is reasonable to be guided as to operation by the effect on the patient of the tentative administration of thyroid extract. Those cases in which the symptoms are aggravated by the thyroid extract will be the more likely to be helped by thyroid operation. The indications for operation are less strong in cases of Graves's disease of the "sympathetic type," so-called "sympathectomy," being probably the preferable operation if surgical measures are to be employed at all. In cases of goitre secondarily exophthalmic the indication for thyroid operation is strong. Further indications for thyroid operation in Graves's disease are the general indications for surgical interventions in other parts of the body, thyroid abscess, pressure symptoms, malignant disease, etc. The more typical and regular the case of Graves's disease the more likely

it is to be benefited by operation on the thyroid gland, while the more widely the symptoms differ from those known to be due to simple hyperactivity of the thyroid, the more ready we should be to turn to other methods of combating the disease.

The Pathology and Surgical Treatment of Bright's Disease.

S. C. Gordon (*Annals of Gynecology and Pediatry,* November, 1903) says that Bright's disease is primarily an acute inflammation of the kidney structure, not dependent upon any specific infective germ, which if early recognized and properly treated will terminate by resolution.

If neglected or not recognized, repeated acute attacks may occur, each one leaving products of the inflammatory process, which may organize or even suppurate.

Acute attacks are always short, but leave more or less products, which interfere with the circulation, finally producing a chronic passive congestion incorrectly called "chronic inflammation."

The result of these attacks is an enlargement of the organs, causing pressure of the fibrous capsule.

Complete decapsulation relieves this pressure, depletes the distended vessels by more or less bleeding, and allows the circulation to resume its normal condition and absorb the exudate.

Even one kidney alone may be involved, and the symptom be relieved by operation upon that one only.

The surgeon may be justified in operating even in cases far advanced when the suffering is great, simply for relief of the suffering.

The Differential Diagnosis of Exophthalmos.

At the recent meeting of the Medical Society of the State of Pennsylvania, J. E. Willetts (*Medical Record,* Oct. 17, 1903) read a paper with this title in which he said that while the diagnosis of the condition *per se* is an easy matter, the diagnosis of the cause, which is essential before deciding upon treatment, is a difficult matter. Graves's disease is usually easy of diagnosis, although in some cases the exophthalmos is absent, in which event Von Graefe's symptoms might be either absent or present. The course of the disease is usually chronic, but instances have been

reported in which the disease had developed in a single night. Innervation lies at the root of the disease, and the sympathetic is the part of which the function is disturbed, and there is dilatation of the vessels in the region supplied by the carotids, which dilatation is responsible for the production of the exophthalmos. Certain conditions, such as hernia cerebri, might exist in the orbit, and produce the exophthalmos. This condition is liable to be confused with dermoid cysts, the important differentiating points being as follows: (1) A meningocele is immovably attached to the bone; (2) a tumor of this kind shows the pulsatory and respiratory oscillations which are communicated to it from the brain; (3) a meningocele may be diminished in size by pressure with the fingers; and (4) in order to be perfectly certain an exploratory puncture of the cyst must be made. Orbital aneurism may closely resemble orbital cellulitis, and a valuable feature in the differential diagnosis is that pressure of the carotid on the same side as the aneurism will diminish the pulsation and sounds present, or cause them to disappear altogether.

Special Influences of the High Altitude on the Nose and Throat.

S. E. Sally (*Journal of the American Medical Association,* Nov. 14, 1903) says that surgical measures are often demanded at an altitude in cases which had previously gotten along comfortably without it at sea level. The results of such procedure are at least as satisfactory as elsewhere, but more than usual care must be taken to save all secreting tissue.

The local symptoms of atrophic rhinitis are aggravated, though the constitutional conditions are often markedly improved.

The moist form of hypertrophic rhinitis is much improved.

In disease of the accessory sinuses, if the appropriate relief is given, the affected surfaces dry up and heal more rapidly and surely than at sea level. In this respect the result is the same as is well known to be the case in the healing of other wounds and ulcerations.

With regard to surgical cases treated at an altitude, nasal or otherwise, it is undoubtedly true that they do better and require less postoperative care than at a low level.

There appears also to be an absence of the danger of infection to the wounds inflicted on tuberculous cases, which is usually so much dreaded elsewhere.

Gonorrhea.

D. Schlasberg (*British Medical Journal,* Sept. 26, 1903) as a result of extensive clinical studies draws attention to the following points: Folliculitis is a very frequent complication of gonorrheal urethritis and markedly retards recovery. The prostate, without exhibiting any palpable changes, may be a lurking-place for the gonococci and so provide a source for reinfection. The occurrence of epididymitis appears to hasten the resolution of the urethritis, especially when there is an accompanying folliculitis. Inguinal adenitis apparently has the same effect.

MEDICINE.

Etiology and Prevention of Infantile Diarrhea.

At the recent Conference of State and Provincial Boards of Health of North America, J. M. Knox (*Medical Record,* Nov. 7, 1903) read a paper on this subject. He said no single organism was considered to be the cause of infantile diarrhea until the experimental work of Duval and Basset. Following Shiga's work in 1898 the dysentery bacillus was found to have wide distribution, and from year to year the distribution of the organism had been found to be more general. Reference was made to the investigations of Flexner in the Philippines in relation to dysentery among soldiers and the Shiga bacillus as a cause of it. Subsequent investigations made by bacteriologists in Germany, China, Constantinople, etc., disclosed the existence and prevalence of this bacillus in epidemic dysentery, so that its pathogenicity is now well established. At the suggestion of Flexner, the speaker and others undertook a series of investigations at the Wilson Sanitarium, and of fifty-three cases carefully examined the Shiga organism was found in greater or less number in forty-two. Careful clinical examination, however, showed definitely that no one type of the disease could be associated with this organism, and that intestinal diseases of all types, common among children in summer, were caused by the same organism. Laboratory investigation had shown two or three types of organism very closely related.

Thus far the great majority of cases in babies has been the acid Harris type. It was found that not only during the summer, but in the winter, sporadic cases of infantile diarrhea were associ-

ated with this organism. Wolfstein had reported thirty-seven sporadic cases of infantile diarrhea occurring in winter, and Basset four cases, seen in the Johns Hopkins Dispensary, due to this organism. Shiga, by the serum treatment, had reduced the mortality of dysentery from 20 to 30 per cent to 10 and even 7 per cent. In twenty-five cases treated by injections of serum at the Wilson Sanitarium, some betterment was noticed after the injection in the cases that were seen early, but the improvement was not brilliant or startling. In eight cases the serum had a beneficial action. In connection with the serum there were changes made in diet, and other medication was used, so that the results obtained were confusing in their interpretation. In cases of long standing associated with an inflammatory condition of the intestinal tract in which there was probably ulceration, blood in the stools, etc., the serum was of no avail. Although the serum treatment was not very beneficial, it was harmless, as no deleterious effect was observed in any of the cases.

Psychoses and School Life.

Wm. J. Herdman (*Journal of the American Medical Association,* Nov. 14, 1903) says that in attempting to formulate a plan for the removal of physical and mental defects he would suggest the following:

A careful medical inspection of schoolchildren at the beginning of their school life and at stated intervals thereafter, covering both their physical and mental capacities.

All teachers should be well instructed in the physiology and psychology of the child and in the principles of school hygiene.

School buildings and their environments should be made to comply with all the requirements of modern school hygiene, as to light, pure air, temperature, seating, decorations, playground facilities, etc.

The curriculum should be so flexible as to allow more opportunity for the exercise of the individual judgment of the teacher, as to the best method to adopt for each child in order to secure for it the greatest educational value; and the curriculum should include facilities for appealing to the mental faculties along every sensory pathway, among which facilities he would mention nature study, rational kindergarten, manual training, and physical exercise.

The number of pupils assigned to any one teacher should be

only such as she can care for to the best advantage. Time should be allowed the teacher for a careful study of the physical and mental needs of each pupil.

A closer relationship between the parent and teacher, with a view of securing the end sought—the highest and most useful development of the child.

The removal as far as possible of all conditions within or without the schoolroom that interfere with the accomplishment of this purpose.

Volvulus of the Stomach.

C. D. Spivak (*American Medicine,* Oct. 31, 1903) concludes: (1) The occurrence of volvulus of the stomach is a possibility beyond a doubt; this condition should be borne in mind when making a differential diagnosis between pyloric obstruction, occlusion of the bowels, poisoning, cyclic vomiting, cholelithiasis, peritonitis, etc.; surgeons should be ready to operate when necessary, and not forget to empty the stomach of its contents. Authors should devote some space to this condition in their text-books. (2) Volvulus of the stomach occurs in all ages and in both sexes. (3) Digestive disorders may be considered as etiological factors. (4) From a pathological standpoint volvulus may be divided into that due to organic changes and that in which no visible organic changes have taken place. (5) The characteristic symptoms are: Sudden onset; distention, which begins in the left hypochondriac region and gradually increases in size; a tumor which gives on percussion a tympanitic sound; vomiting or regurgitation immediately following ingestion of food or drink; no belching, no escape of flatus; inability to pass a sound into the stomach. (6) When the condition is recognized, early operative interference is indicated, and recovery is almost certain.

The Cerebrospinal Fluid of Patients in the Secondary Stage of Syphilis.

At a recent meeting of the Paris Academy of Medicine, M. Ravant (*Lancet,* Oct. 24, 1903) communicated in his own name and in that of M. Thibiuge some statistics based upon the cytological examination of the cerebrospinal fluid in 118 patients suffering from the second stage of syphilis; 54 of these patients had either no obvious secondary symptoms or only showed roseola and mucous or cutaneous plaques. Seven of these only gave a

definite lymphocyte reaction, whereas out of 55 patients who showed pigmentary syphilides, papular syphilides, or syphilitic psoriasis, 41 showed a definite lymphocyte reaction, in some cases very marked. Two patients suffering from syphilitic alopecia, and two other patients in which facial paralysis had supervened during the secondary period, showed marked lymphocytosis. Of five patients suffering from syphilitic iritis one only showed lymphocytosis. In all the patients who showed the cellular reaction the quantity of albumin, which only exists in very small amount in normal cerebrospinal fluid, was much increased. It would seem, therefore, that these facts prove that in patients affected with secondary syphilis there exists together with certain cutaneous reactions nervous reactions which are to be diagnosed by an examination of the cerebrospinal fluid, and these nervous reactions would appear to develop on parallel lines with those of the skin. The reaction should be regarded as one of the many manifestations of syphilis, and when present would appear to show that the treatment should be very thorough.

Gonorrhea in Infants.

R. B. Kemball (*Medical Record,* Nov. 14, 1903) says that gonorrhea prevails among infants and children to an extent not fully appreciated by the medical profession at large, and has become a common epidemic in institutions where numbers of children are placed together.

The ordinary clinical forms which the gonococcus infection assumes in children are ophthalmia, vulvovaginitis, and pyemia.

A series of cases of pyemia reported in this paper occurred in infants in whom no local lesion could be found to explain the mode of entrance of the organism to the general circulation.

The suggestion is made that from a stomatitis due to the gonococcus such a systematic infection may arise. Gonorrheal stomatitis in infants is a disease that needs further study.

Only by careful exclusion, by microscopical examination, and by complete isolation can this disease be absolutely debarred from a hospital where infants are cared for.

There is urgent need of public enlightenment on this subject. Those in charge of institutions for children, trained nurses, and even parents, should be taught the frequency and virulency of this infection and the ease with which it is spread. It should be the duty of health authorities to include gonorrhea among the acute infectious diseases of children.

The Comparative Value of Oral and Rectal Temperatures in the Study of Pulmonary Tuberculosis.

Temperatures carefully taken in the mouth during rest form, according to S. R. Williams (*British Medical Journal,* Oct. 24, 1903), a reliable guide in the management of phthisical cases under condtions of sanitarium life.

Temperatures taken in the mouth during or shortly after exercise cannot be considered trustworthy unless registered with such precautions as militate against their general practical applicability.

Temperatures taken in the rectum during rest generally speaking register higher than in the mouth, but do not otherwise usually afford any special assistance in the management of phthisical cases.

Temperatures taken in the rectum during or shortly after exercise in both healthy and phthisical subjects register considerably higher than that in the mouth, and whilst in the non-tuberculous the return to normal is more rapid than in the tuberculous, no special direct advantage for the phthisical appears especially to accrue from this method.

For practical purposes, in the management of phthisical cases undergoing so-called sanatorium treatment, the registration of temperature by the oral method when taken during rest and with due care affords reliable guidance.

The Cultivation of Trypanosomes.

Drs. McNeal and Novy (Contributions to Medical Research; Michigan Laboratories, June, 1903) have succeeded in cultivating the rat trypanosome, or trypanosoma Lewisii. They prepared their culture medium by melting ordinary nutrient agar, cooling it to 50°, and then mixing it, in the proportion of 3 to 1, with sterile defibrinated blood. The tubes were then slanted and allowed to solidify. After solidification the tubes were placed upright so as to allow as much water of condensation as possible to collect at the bottom. In this fluid, trypanosome blood, free from bacterial contamination, was inoculated. Cultures were obtained both at room temperature and in the incubator. The former, though slower, were surer than the latter, and retained their vitality for months, whereas the latter tended to die out in two or three weeks. In the cultures made at room temperature the viru-

lence was maintained through several generations; in one instance a culture of the tenth generation, of a series which had been under cultivation for an entire year, was proved to be virulent.

Changes in the Gastric Juice in Unilateral Nephrectomy.

Stejskal and Axisa (*Centralblatt für innere Med.*, 1903, No. 38) in their experiments on unilateral nephrectomy in dogs demonstrated certain changes in the secretions in the stomach, namely, the reduction of hydrochloric acid, extending over a period of several days. The hydrochloric acid steadily decreases for the first few days, and on the third or fourth day after operation reaches its maximum, a total achlorhydria being reached. A gradual increase in the secretion of hydrochloric acid then occurs, until on the tenth day the normal is regained. The authors maintain that there is a peculiar relationship between the stomach and kidneys and in the chemical changes in the blood. (This article is only a preliminary report.)

Tubercle Bacillus of the Turtle.

Friedman (*Cent. für Bact. Parasit. u. Infect.*, Bd. 34, No. 8, 1903) says that in all the cold-blooded animals employed by him in his experiments, with the exception of two carp, the turtle tubercle bacillus was found to multiply rapidly. The animals employed were snakes, lizards, eels, and frogs. Amongst the warm-blooded animals birds and dogs seemed to be immune, as were also rats and mice. Rabbits and guinea-pigs are susceptible, although the infection remains localized; in the latter, if the infecting dose is not too large the animal completely recovers. The bacteria isolated from the turtles cannot be differentiated by culture from other varieties of the tubercle bacillus.

A Rare Case of Staphylococcus Dermatitis Concomitant with Diabetes.

Studinski (*Virchow's Archiv*, 174, H. 1) reports a case of a man twenty-nine years old suffering from diabetes who had a peculiar skin eruption. This eruption first evidenced itself by the formation of small pustules, which gradually enlarged, and on attaining the size of one cent ruptured spontaneously; granula-

tion then set in, and the lesion healed. Bacteriological examinations showed staphylococci, and on rubbing pure cultures into the skin a similar affection was produced. The unusual form of this condition and the dissemination of the staphylococcus throughout the whole of the skin surface may be explained by the lowering of the resistance by the concomitant diabetes.

Experimental Tuberculosis.

J. de Haan (*Virchow's Archiv,* Bd. 174, Heft 1) succeeded in infecting Javanese goats, cattle, and horses by means of subcutaneous injections of tubercle bacilli cultures, tuberculosis not having been previously demonstrated in these animals, thus showing that no species immunity exists. In apes which were fed with tubercular material marked susceptibility was demonstrated. Of interest were the post-mortem findings, as the lesions were evidenced in the lungs only, the intestines not being affected, although the mesenteric glands were tubercular. In one ape who ate a potato infected with tubercle culture a disseminated tuberculosis of the bronchial glands was found. The author concludes that tuberculosis in animals is transmitted from the human.

THERAPEUTICS.

On the Use of Pure Carbolic Acid in the Treatment of Smallpox.

A. E. Brindley and F. W. Bonis (*Lancet,* Oct. 24, 1903) recommended the use of pure carbolic acid in the treatment of this disease. The treatment is carried out in the following manner: The pure acid in a liquefied state is applied to the vesicles over a limited area with a small camel's-hair brush, the application being made on successive days. On the first day the face and neck are selected for treatment, on the following day the hands and arms, then the lower extremities, and finally the trunk. The effect of the acid is seen in the rapid shriveling up and scabbing of the vesicles. A second or third application may be made if necessary over certain parts of the body. An important detail of the treatment is to secure the early removal of the scabs, either by an oil poultice or otherwise, as this tends to prevent subsequent abscess formation.

This method of treatment, according to the writers, is one which takes some time to carry out, as it must be done carefully and thoroughly if the best results are to be obtained. There is no reason why it should not be entrusted to an intelligent nurse, with instructions to use the acid cautiously in the neighborhood of the eyes, and not to allow it to run on the healthy skin. The treatment is found to cause little or no pain or discomfort—in fact it relieves the intense irritation which is so prominent a feature in smallpox. We have not observed any signs of carboluria or other evidence of toxic action from absorption of the drug. The effect would appear to be purely a local one, the acid penetrating the walls of the vesicles and pustules, disinfecting their contents, and hence preventing the absorption of septic matter into the system.

One of the most striking results of the treatment is the comparative mildness of the secondary symptoms or those coincident with the maturation of the pustules. In many cases the patients expressed themselves as feeling well and hungry by the eighth or ninth day after the appearance of the rash, or even earlier. By this time the pustules on the face will have disappeared, and the great majority of those on the limbs and trunk will have dried up or aborted. After the temperature has fallen on the appearance of the eruption, it usually remains at a low level during the rest of the illness, even in severe confluent cases averaging not more than 100° or 101° F. In several of the author's patients the temperature was practically normal throughout. A corresponding improvement is noticed in the state of the pulse and the general symptoms.

With regard to the subsequent pitting the carbolic treatment is decidedly beneficial in lessening the disfigurement, although it is not to be relied on as a certain preventive. We think it is reasonable to conclude that, by shortening or modifying the severity of the pustular stage of the disease, the liability to the formation of deep and permanent scars is diminished. Another point is that this use of the germicide tends to diminish the risk of infection from aerial convection, and to remove the disagreeable odor which accompanies many cases of the disease.

The Modern Treatment of Typhoid Fever.

W. E. Rice (*St. Louis Medical and Surgical Journal*, November, 1903) reports the following four cases of typhoid fever, in which his principal therapeutic reliance was acetozone.

Case A.—Found patient with temperature of 104°; furred tongue; dry, hot skin, but no tenderness. Gave mild chloride, and the next morning twenty-four grains of quinine sulphate, divided in three doses; sponge baths; evening of second day temperature was 104.5°, tympanites and tenderness. Continued routine treatment until the end of the sixth day, when he could see no change. Commenced the acetozone, giving twenty grains of the powder during the twenty-four hours. At the end of the second day of this treatment the temperature began to gradually drop. At the end of the seventh day it became normal, and so continued.

Case B.—Complaining for one week. Found temperature 104°; headache; coated and parched tongue; tympanites and tenderness in the right iliac region. Gave mild chloride followed with guaiacol carbonate for three days, without any apparent effect. Ordered acetozone in the powdered form, in same dose as in the preceding case. Temperature began at once to drop until the ninth day, when it became normal and convalescence was established.

Case C.—Had been complaining one week with headache, fever, and chills. When called found tongue coated, headache, temperature 103.5°, tympanites and tenderness, and inability to sleep at night. Gave mild chloride, and the next morning commenced the acetozone. The temperature was now 102°. Gave the solution—twenty grains to the quart of sterilized water—two ounces every two hours. At the end of the eighth day temperature was normal and convalescence established.

Case D.—Had been complaining for some three or four weeks with diarrhea and general malaise. When called found temperature 102°; some tympanites and tenderness in right iliac region, with eight to ten stools daily. Temperature rose to 104° on the third day, when he commenced the acetozone, giving twenty grains during the day. On the eleventh day temperature became normal and convalescence was speedy.

Pathology and Therapy of Acute Pancreatitis.

Pels-Leusten (*Deutsche Zeit. für Chirurgie,* Bd. 70, 1903) believes that the fatty necrosis of the abdominal tissue is an indication of the disease of the pancreas, going hand in hand with a stasis of the pancreatic secretion. The author reports two cases cured by laparotomy; in both cases he found considerable

fatty necrosis, and in one a large amount of yellowish, turbid exudate in the peritoneal cavity. The symptoms consisted of severe vomiting, weakened heart action—in fact the picture of peritonitis. The operation consisted of simply opening the abdominal cavity and tamponing the region of the pancreas with iodoform gauze, with the result that directly after the operation the vomiting ceased and the patients made an uneventful recovery.

The Method of Action of Crede's Collargol.

J. Bamberger (*British Medical Journal,* Oct. 24, 1903) has studied the method of action of collargol in septic conditions, and in describing these he states that he does not intend to publish cases which shall speak for or against the treatment, but merely wishes to show how the effect on septic infection is attained. Credé regards the action as a purely bactericidal one, but Brunner showed that this was not so, since collargol exerts only a marked inhibitory action on the growth of bacteria and no destructive action. He found that the number of leucocytes, and especially of eosinophile cells and lymphocytes, is greatly increased during the first and second day after the injection. Bamberger added some collargol to horse's serum, and found that silver particles were thrown down from the solution. In the course of eight days the serum tubes, which had been exposed to the air, were simply crowded with bacteria. Experiments with injections showed that the silver is deposited in the blood current as very finely divided particles, and is not kept in solution. The deposited silver particles cause enormous numbers of leucocytes to be attracted to them, and the latter absorb these particles. In doing this they fall a prey, and the body seeks to cover this defect by producing more leucocytes. As a rule the toxins of septic bacteria call forth an increased manufacture of leucocytes, but the stimulus is greatly increased by injections of collargol. He was able to show in some experiments on rabbits that certain tissues—for example, kidney, spleen—contained an increased amount of iron, mostly in the form of hemosiderin, which is due to the destruction of red blood-corpuscles. Experimenting on himself by rubbing in Credé's ointment, he found that during the first two hours the number of leucocytes diminish, but five hours after the rubbing in the number is markedly increased.

Bamberger next discusses the question whether part of the action may not be due to the colloidal properties of the preparation,

and tends to support this argument by a simple experiment. If one adds a few drops of a two-per-cent solution of collargol to peroxide of hydrogen, the drops fall at first to the bottom of the test-tube, and then rise suddenly, as oxygen is liberated, and at last get split up into fine granules. These granules are blackish-brown, and have the same appearance as the silver particles found in the organs of frogs after collargol injection. It may be that the catalytic action of collargol silver is the reason why collargol is not kept in solution in the blood. He thinks that further investigation is necessary before one can decide how far this property of collargol affects an infection, or if the whole action is dependent on the increased leucocyte formation.

Observations on the Iodine Reaction in Children.

C. H. Dunn (*Boston Medical and Surgical Journal,* Nov. 5, 1903) summarizes his results as follows:

(1) The reaction is always present, usually of average and often of marked intensity, a high percentage of cells being affected in the following conditions: Lobar pneumonia, bronchopneumonia, cerebrospinal meningitis, influenza, empyema, suppuration (non-tuberculous), and was found present in single cases of appendicitis, diphtheria, and starvation. (2) The reaction is usually present, but may be absent in cases of typhoid fever and miliary tuberculosis. (3) The reaction may be absent or present in anemia. (4) The reaction is usually absent, but may be present in nephritis, cardiac valvular disease, and tuberculosis.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
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Retroversion of the Uterus.

L. H. Dunning (*Journal of the American Medical Association,* Nov. 14, 1903) says that simple uncomplicated retroversion of the uterus gives rise to but few symptoms, the chief of which are backache and bearing-down pain. Painful menstruation occurred in 37 per cent of the cases. Uncomplicated cases consti-

tute but 7.01 per cent (8 in 112) of the cases studied. Five uncomplicated cases were treated by the non-operative plan, three were cured, and two greatly relieved.

The severity of the symptoms and the prospect of cure depends largely on the number and character of the complications. Prolapsed and chronically inflamed ovaries, endometritis, and laceration of the cervix uteri constitute the most common and serious complications.

The most common complications are: Prolapses of one or both ovaries, 42 per cent; endometritis, 28 per cent; laceration of the cervix, 24 per cent; prolapsus of the uterus, 15 per cent; adhesions, 13 per cent; laceration of the perineum, 7 per cent; movable kidney, 7 per cent; ovaritis without displacement, 8 per cent of cases. The most common and almost universal symptom is pain, 74 per cent. This includes painful menstruation, 36 per cent; backache, 35 per cent; pain in inguinal regions extending down the limbs. In but 21 per cent of cases did habitual constipation exist. Various degrees of invalidism existed in all complicated cases.

In the treatment of the simpler and less complicated cases the non-operative treatment yields satisfactory results. Recent cases, especially those following labor, improve rapidly under this form of treatment.

Displacements of long duration, accompanied by the more serious complications, are not cured by this method, and the benefits resulting are scarcely sufficient to justify the effort.

Operative methods in the severest forms of displacement and complication are attended by a large percentage of cures and should be employed in preference to all other means. So large a percentage of these cases have multiple complications that two or more operations may be required in each case.

The danger attending the operative method of treatment is small. In the twenty-one cases reported there was no mortality.

Clinical Study of a Gravid Uterus at Term Fixed in Lateral Retroversion by Perimetric Adhesions.

Pinard (*British Journal of Gynecology*, August, 1903), from an exhaustive study of a case in which the uterus was amputated after the child had been extracted by Cæsarian section, formulated the following conclusions: (1) Extensive perimetric adhesions fixing the uterus in an irreducible malposition are not incompati-

ble with the development of pregnancy to term. (2) In the case considered, the great deficiency in the development of the adherent posterior wall of the gravid uterus fixed in lateral retroversion was compensated by exaggerated development of the free surface of the anterior wall. (3) The irreducible fixation of the uterine body in lateral retroversion also led to an atypical development of the inferior segment—that is to say, to an enormous distention of that portion of the uterus upon which the axis of the deviated uterine body ended. (4) The irreducible malposition of the fetus corresponded with the complex distortion of the uterus and the unequal development of its walls. (5) The consequent dystocia necessitated the Cæsarian section and hysterectomy in the interests of both mother and child. (6) The intervention was completely successful as regards both.

Shortening of the Round Ligaments for Retrodeviation of the Uterus.

H. Waldschmidt (*Centralbl. f. Gyn.*, No. 27, 1903), in a dissertation based on the 37 cases last operated on in the Hamburg-Eppendorf Hospital by Kocher's method, reports that of a total number of 151 patients on whom the Alexander-Adams operation was performed by Kuemmell, 91 were subsequently examined, and the result was found to be satisfactory in 89, recurrence having taken place in 2 only; 9 patients had been confined without any accident, and 3 were pregnant and not suffering in any way. No drainage was employed after the operation, nor was any pessary introduced; the patients were kept in bed for twenty days, and discharged at the end of four weeks.

An Adenomatous Growth of the Peritoneum in an Abdominal Cicatrix.

R. Meyer (*British Journal of Gynecology*, August, 1903) describes a specimen taken from a woman of thirty-five who had undergone laparotomy and ventrofixation of the uterus. Two years afterward a nodule in connection with the fundus uteri had developed in the cicatrix, and was excised with the scar, and this nodule contained cysts and canals which must have been derived from the serosa of the uterus or of the abdominal wall.

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ORIGINAL CONTRIBUTIONS.

PERSONAL EXPERIENCES IN ANGINA PECTORIS.

BY M. B. SMITH, M.D.

As practicing physicians we see many cases of incurable or serious disease living in comparative happiness because of ignorance of their true condition. Often the saddest thing in a physician's experience is to see a brother practitioner stricken down with some disease which he realizes must end fatally. It is one of the unfortunate sides of a physician's knowledge.

Curiously enough, however, much of the medical knowledge of the day has come from the work of physicians on their own cases, or from the impetus they have received from the fact that they were sufferers from certain diseases. It is a well known fact that diseases have lain undiscovered and unsuspected until diagnosed rightly by some suffering physician. An excellent illustration of this fact is seen in the case of so-called "hay-fever" or "autumnal catarrh," which was first described by Dr. John Bostock in 1819 in the tenth and fourteenth volumes of the Medico-chirurgical Transactions under the name of "autumnal catarrh." Bostock, attracted to this disease by his own sufferings, collected twenty-eight similar cases, ten in his own observation, and from these reports arose the conception of a new disease or condition. Again, in this same disease, Dr. Morrill Wyman, professor of theory and practice of medicine in Harvard University, described in 1854 another form of catarrhal trouble occurring in the spring which he termed "rose cold" or "June cold," which seemed to him different from the "hay cold" or "hay fever." Nowadays the profession is inclined to believe that these divisions are superfluous.

Cases are on record where physicians have diagnosed their own diseases, even in such insidious mental conditions as paresis.

Chase in his recent work on "General Paresis" cites a case where a physician decided correctly that he had paresis, only to lose later his conception of his own case in the deterioration occurring in this disease. Haussman, a German physician, a few years ago described his sensations and experiences occurring during an attack of diphtheria, and especially during the diphtheritic palsy which happened to follow in his case.

Coming to heart cases, we find many illustrations—one of the most famous is that of Dr. Hiram Corson, of Conshohocken, Pennsylvania, who practiced over sixty years in the hardest sort of country for exposed work, and who suffered all this time from attacks of what was diagnosed by Professor Horatio C. Wood as "cardiac nerve storms." Despite these attacks Dr. Corson lived to a very ripe old age, as the writer can testify. I spent a day with Dr. Corson after he had been in practice sixty years, and his vigor, both mental and physical, was far above the average of the men half his age. He drove down the steep hills of his region with the utmost recklessness; or rather he allowed his horse to run down, for he threw the reins on the floor of his buggy, and, laughing at my expression of alarm, said he spent his hours in his carriage reading, allowing his horse to depend on his own agility to save his neck and that of his master. It seemed to be a good plan, for Corson did it for sixty years, and finally died in bed.

I wish to describe my own experience in angina pectoris, as I believe it will be useful to many practitioners, for the text-books do not give details enough to cover these cases intelligently. John Hunter, a sufferer from this disease, was wont to say, "My life is in the hands of any rascal who chooses to annoy and tease me," and he subsequently died during a fit of anger.

Of course we must realize at the outset that angina pectoris is only a symptom, as dropsy is a symptom, and due to many varying causes. There are many morbid conditions of the heart and vessels which will produce angina. Generally these conditions are associated with sclerosis of the root of the aorta and changes in the coronary arteries. Osler believes that true angina is a rare disease, but such has not been my own experience.

Again, it is a disease of adult life, occurring generally in men. Huchard collected two hundred and thirty-seven cases, of which only forty-two were women; while in a series of Osler's cases of forty only one was a woman. Angina according to the text-books comes on frequently following exertion, such as walking up-hill, or sudden muscular effort. In my experience it is far more apt to

come on owing to a long-continued strain, which in itself may seem slight. I will cite an instance to illustrate my point. A well-known man, apparently in superb health, suffered from angina severely. He was under care of his physician for years, and lived a quiet life, but undoubtedly the angina was due to an exciting tragedy in which he had figured some years before, during which he was under prolonged mental strain. Staying one summer in the country, he had several slight attacks of angina, and consulted with a country practitioner about the advisability of driving to town, a distance of ten miles. The country doctor, looking at his magnificent physique, at once advised it would be perfectly proper. He examined the patient's heart, and to him the story of angina seemed a myth. The man drove to town with a peculiarly hard-mouthed horse, and on reaching his door-step, tumbled over dead. Undoubtedly the steady strain for two hours threw the heart and its arteries into such a spasm that it quenched the man's life. If he had stayed quietly in the country until the attack was over, he might have lived indefinitely. The country physician, on hearing the result of his advice, was astounded. He said at once: "I have practiced for thirty years, and I will acknowledge I know nothing about angina; the man seemed in superb health; there was no heart lesion; his appearance was calm, his heart-beat steady and quiet, and it looked to me like a man who was simply a little nervous over nothing."

Again, violent sustained work coupled with mental anxiety is peculiarly liable to produce angina; I have found that many old football players have the disease. The exertion and the anxiety work together with dire results. Latham makes a distinction in the paroxysm; the pain or *dolor pectoris,* and the indescribable feeling of anguish and sense of imminent dissolution—*augor animi.* The pain may be of any sort at all, sometimes radiating up the neck and down the arm, with numbness of the fingers. Generally it is a sensation as if steel fingers were clutching the heart, as is somewhat graphically pictured in advertisements in the medical journals. This paroxysm may be so short that it seems like a flash of electricity, or it may last a minute or two. It is in the latter cases that the sense of death is generally imminent. While there is great restlessness, there is also curiously a great longing for intense quiet of body and mind; the patient hates to see or hear bustle or confusion. A feeling of exhaustion or even collapse follows, lasting even several days. Head and Mackenzie have tried to study the radiation of this pain, and conclude that in diseases of the heart, and more particularly in aortic

disease, the pain is referred along the first, second, third, and fourth dorsal areas, while in angina it is referred along the fifth, sixth, seventh, and even eighth and ninth dorsal areas.

There are many theories as to the cause of this pain. Some believe that there is a true neuralgia of the cardiac nerves. The sudden cramplike character of the pain and the suddenness of the attack are not especially like neuralgia elsewhere. Other authorities think it is a cramp of the heart muscle itself, or that it may be due to the extreme tension of the ventricular walls associated with sclerosis of the coronary arteries. The "Allen Burns" theory is that the condition is one of transient ischemia of the heart muscle in consequence of disease or spasm of the coronary arteries.

I will now take up my own experiences in the disease. In the first place I have no drug or no treatment that seems to be of value in the disease. Years ago I tried the use of nitrite of amyl as originally advised by Lauder Brunton. In my case it made me feel ten thousand times worse; the pain may have been relieved, but there was a sense of impending death which the drug made worse, and a fulness of the head that was simply terrifying. I have found the attacks went off as well without the drops as with them, so I speedily rejected this form of treatment. There is a relaxation of the heart and its contractions brought about by nitrite of amyl that seems to me almost as dangerous as the opposite condition. I then tried other drugs and other treatments, but practically they were *nil* in their results.

Hence I am forced to this conclusion: *the way to treat angina pectoris is to make the patient live in such a manner that the possibility of the attacks is decreased.* I believe no drug or treatment does much for the attack; therefore when you have a sufferer from angina under your care, it does not pay to temporize. Get that patient into a method of life that will help ward off these attacks. What do the statistics of Huchard and Osler show, with practically no women in their lists? It means that angina is due to anxiety and strain. It is an expression of "strenuous life," so widely advertised and advocated by our writers of the day.

As a rule you will find these sufferers are busy business men with heavy anxieties; those strains must be removed. The utmost objection will be made at once by these men: "We can't stop;" "We have families to support;" "We'll stop next year," etc. It will not do; your patient must lead a quiet, comfortable life, getting plenty of sleep, good food, and exercise. It is here that golf I believe is of use; many men have found it has cleared their

brains, stimulated their hearts, and removed anxieties. This seems a simple thing to do, to remove a patient from his sources of trouble; but it will tax the courage, the ingenuity, and the honesty of any practitioner. I say honesty, for it is so much easier to shut our eyes and let things go on as they are.

There is another feature which I have seen mentioned in no text-book or article on angina. It is that angina changes the character of its victim: for example, instinctively such a man will avoid the things which produce these symptoms until it will change a combative man into the veriest coward. I have found that anger or indignation is my especial *bête noire,* and I have gone far out of my way to avoid unpleasant people, unpleasant sights, or unpleasant duties. I have let things pass that I should have taken up because I knew it would produce angina. Even the envelope of a letter which may contain unpleasant news I hate to see. I find that I must avoid strain and strenuosity, and it has been a great detriment to my progress, for it may convince my neighbors that I am sleepy or unprogressive. But in this way I have cut down my attacks of angina in fifteen years so markedly that I never now have more than rumblings of the disease, having had no real attack for several years. Fifteen years ago I had them frequently, some of them being so bad that I could not lie down, but was propped up in bed with anxious-eyed watchers around. Now I would pass muster in any physical examination, and am considered by every one to be in perfect health.

I avoid the people who irritate and annoy me; I cultivate those who stimulate me pleasantly; it is absolutely vital. I have been compelled to give up surgical work, for several times angina came on during operations; and I have found obstetrical work very bad for me. This may be different from other cases; I am citing simply my own.

Another phase angina has produced in me is that of temper. As I have said, I will go miles to get out of the way of unpleasant people, but in the past I have found it occasionally impossible. Then realizing that I was in for an attack of angina, I have felt so outraged that any one would jeopardize my life, even unwittingly, my anger has been excessive. I have surprised greatly every one who has had any unpleasantness with me by my vigor when aroused. I do not seem to be able to control this; my reasoning powers are opposed to it, but it seems as if the paroxysms which come on at this time produce a state of almost delirious excitement. Afterward I react terribly, and am unfit for work for a week at least. I had no experiences before angina developed, and

in the past few years have been able to control such feelings better, largely by avoidance of sources of annoyance.

I believe that a case of angina pectoris caught early in its progress can be indefinitely held up by careful coöperation of patient and physician by such treatment as I have outlined. After fifteen years in the condition, I am in a thousand times better shape by the simple use of a definite plan.

In closing I would only say one word as to rest. I am a great believer in the theory that our bodies are after all only storage batteries containing a certain amount of force. This can be used up slowly or quickly. Dr. Wm. Pepper died at fifty-six after having done a life's work which he might have prolonged to seventy-five or eighty. And by rest I mean rest in the recumbent position. Lying down, the heart's work is simpler and easier, and this in seventy years may be a great factor. Rest as much in the recumbent position as possible during the day.

Surely my treatment of my own case has been a success. I would rather be alive and live along quietly and unassumingly than be dead, with a big notice in the *Journal of the American Medical Association.*

PRELIMINARY REPORT OF A CASE OF MORBUS ADDISONII.

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That there exists an intimate and reciprocal relation between the suprarenal capsule, thyroid gland, and pituitary bodies may easily be demonstrated by rightly interpreting the symptomatology of the following case:

Mrs. V. M——, Galician, aged thirty-eight, married, and mother of five children. The family history reveals a neurotic tendency on the maternal side. The past history exhibits nothing remarkable, except recurrent hysterical manifestations, which were known to arise on the slightest provocation. Status præsens: The patient looked very anemic, emaciated, with pinched and hagged facies, pallid mucous membranes, shining sclerotica of a pearly hue, projecting eyeballs—a veritable exophthalmos—and an enormously enlarged thyroid gland, in which the right side and isthmus preponderated. The abdomen was distended and somewhat tender on palpation; pressure in the lumbar region elicited pain. The entire cutaneous surface was the seat of a

bronze-like discoloration, in the shape of ovoid or roundish macules; these were especially marked on the abdomen and anterior thoracic region. The cardiac action was weak, rapid, irregular in rhythm, and dicrotic. The tongue was heavily coated, fissured, intensely red at the margins, and perceptibly tremulous when projected. There was extreme anorexia; digestion was below par, and the alvine movements sluggish. Urinary examination revealed an excess of phosphates. The most remarkable features of this case were the neuropsychic phenomena: the intellect was very dull and mental concentration almost absent, so much so that questions had to be continually repeated before an adequate reply could be received of the patient. She was despondent, morose, capricious, with occasional vehement moments, wherein her emotion broke forth in never-ending sobs and unrestrainable lamentations. The muscular system was in a state of constant tremor, jactitation and involuntary movements. No hematologic examination was made. The malady was of about six months' duration. She has been more or less bedridden during that period, as at times the asthenia was so pronounced and overwhelming that she was forced to assume the recumbent posture.

The treatment was of a sustaining character. Nutritious and easily digestible food was administered at regular and frequent intervals. Fresh air, plenty of sunshine, and cheerful surroundings were enjoined. The medicinal treatment consisted of the exhibition of the extract of the suprarenal and thyroid glands, 2 grains of the former to 1 grain of the latter, in conjunction with 1-60 grain of strychnine phosphate every four hours, alternated with a tablet composed of cannabin, zinc phosphide, and arsenic.

As this is only a preliminary report, and not much time has elapsed since the institution of the above régime, I am not able to say at the present juncture what benefit, if any, may be gained by it. I am rather skeptical as to the ultimate utility of any therapeutic measure in such an advanced case of adrenal disease.

The résumé of the above case corroborates beyond controversy Dr. Sajous's plausible theory concerning the office of the suprarenal capsules in the human economy, and the function of the so-called "adreno-thyro-pituitary system or chain," as he terms it. There undoubtedly exists an intimate relation between these three ductless bodies, as the case under consideration strongly suggests. As to whether these systems are joined to each other by virtue of the intercommunication of the sympathetic nervous system, or by a special set of nerve fibers, remains to be ascertained. Nor can we assert that it is an altered or perverted secretion of these three

glandular structures which brings about the above symptom-complex. Suffice it to say, however, that the clinical picture depicted in the preceding paragraphs warrants the conclusion of the possible interchain of the three ductless organs—the thyroid, adrenal, and pituitary bodies.

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TRAUMATIC NEUROSES.

BY FRANK A. ELY, M.D., DES MOINES, IOWA.

There are few physicians of any professional standing who are not from time to time called upon to appear in court for the purpose of giving an opinion with reference to the probable extent and possible duration of physical injuries alleged to have been sustained by some person as the result of carelessness or negligence on the part of another. It is therefore the desire of the writer in presenting this paper to bring up for discussion a class of nervous phenomena which as a rule follow traumatism, and are so frequently the grounds upon which damage suits are instituted.

The term "traumatic neuroses" is a generic one, which of late years has been applied to a variety of nervous symptoms commonly noted as a sequel of accidents of different kinds, during which physical injuries may or may not have been sustained. These accidents, as a rule, are of the sort which cause great jarring and vibration, especially of the head and spine, and are also the occasion of intense fright and mental strain. Owing to the frequency with which this class of neuroses follow railway accidents, and because of the predilection of their symptoms for the brain and spine, the terms "railway brain" and "railway spine" have become fixed in the popular nomenclature of the legal world, and are recognized to some extent by the medical profession. These unscientific terms are very misleading, since experience has demonstrated that accidents of all varieties and of varying degrees of severity may be responsible for the initiation of these nervous phenomena. So simple an accident as falling from a hammock not infrequently occasions nervous conditions fully as grave as those brought about by more frightful disasters, and equally grave conditions may follow intense fright, during the experience of which the body has received no jarring or concussion whatever.

Traumatism in its original meaning implied physical or bodily injury resulting from violence of one sort or another;

hence the word "traumatic," used in connection with those nervous conditions following accidents, during which no apparent bodily injury has been sustained, would seem to be a misnomer. We must not forget, however, that the psychic man is as real as the physical man, and that any sudden deleterious influence causing psychic disturbance in one who has previously given evidence of sound mind and stable nervous organization may be looked upon as traumatic, even though we may be unable to find a dislocated cell or a fracture nucleus in the tissues of the brain or cord.

As the result of the very imperfect knowledge of the functions of the nervous system, and an extremely meager understanding of the most simple psychic phenomena, many physicians of the past century were inclined to go to one extreme or the other in their opinion with reference to the position which the traumatic neuroses should hold among the mental and nervous diseases. A large number were inclined to look upon persons suffering from these disorders as malingerers and simulators, while others held the opinion that in nearly every instance there are physical lesions of greater or less severity, and laid great stress upon severe concussions and jarring of the central nervous system as the most prolific cause of the disturbance, believing the molecular continuity of the nervous system to be disarranged as a result of excessive vibration. This difference of opinion with regard to the true severity of these cases has led to a great deal of discussion among the most able scientists in this and other countries, and while there are yet many points upon which the minds of the medical profession are not wholly united, I believe that the majority are ready to hold that most of the cases of nervous disturbance following traumatism and fright are the result of true diseased conditions, either physical or psychical, and not the result of deliberate attempts at fraud.

Under the general head of traumatic neuroses we recognize with Osler three classes of cases:

1. That class in which the symptom-group is not essentially different from that of neurasthenia of the cerebrospinal type resulting from causes other than traumatic. To this class has been given the specific name of "traumatic neurasthenia."

2. That class in which there is an underlying profound emotional disturbance, accompanied by many other earmarks of hysteria. This class has received the name of "traumatic hysteria."

3. That class in which the symptoms are less inclined to conform to any definite type, but in many instances are strongly sug-

gestive of organic disease of the central nervous system. Of late years this class has been robbed of many of its important symptoms, as a consequence of our better knowledge of the hysterical anesthesias and paralyses, which were originally looked upon as being of organic rather than functional origin.

In the foregoing introductory lines the etiology and pathology of the traumatic neuroses have been incidentally referred to, but a little time may be profitably devoted here to the assembling of a few facts which observation and clinical experience have been the means of demonstrating in this connection.

As the term implies, we look upon traumatism and fright as the essential exciting causes, but it is only reasonable to believe that there are numerous predisposing causes, in the absence of which these neuroses would not follow in the footsteps of minor injuries and periods of emotional excitement. The heritage of an unstable nervous organism as the result of weak and diseased parentage naturally lays the offspring liable to fall an easy prey to the influence of shock or traumatism. Previous environment has much to do with preparing the ground for a rank development of psychoneurotic symptoms in those who happen to be subjected to the proper exciting causes. Putnam calls our attention to the frequency with which traumatic hysteria occurs in persons whose social sphere has been extremely limited, and whose mental horizon has not been extended by education or by actual contact with the cosmopolitan world.

Self-control, an exceedingly important prophylactic attribute in this class of disorders, can only be gained by contact with circumstances which constantly occasion a demand for the exertion of the will, and where this faculty has never been developed, or has undergone the atrophy of disuse, it is not strange that suggestive impressions induce hysterical symptoms. A lack of self-control probably has less to do with predisposition in cases of traumatic neurasthenia than in traumatic hysteria, yet it undoubtedly plays even here a very important part.

The influences of environment at the time of an accident are fully as important as those exerted before. Our attention is called to the fact that few cases of post-traumatic neuroses are noted as the result of accidents sustained upon the football field or during the pursuance of the ordinary dangerous occupations. We are all perfectly familiar with the severity of the blows and impacts received under such circumstances, and the absence of nervous sequelæ forces us to the conclusion that the mental atti-

tude of the person at the time of accident has much to do with the precipitation or prevention of subsequent nervous disorders.

Subsequent environment is alike influential in this respect. All have observed the deleterious influences exerted over hysterical patients by the sympathy of overzealous friends. Where could a better opportunity be presented for a susceptible person of slender means to make his or her début as the star actor in a hysterical farce-comedy than when made the hero or heroine of some accident, the responsibility for which is placed at the door of some wealthy corporation? Again, how favorable are such surroundings to the production of morbid nosophobias of the neurasthenic, who above everything else needs to have the mind diverted into pleasant channels extraneous to self.

Chronic intoxications and other debilitating influences may be in part responsible for the production of neuroses, yet are more apt to lend a hand in producing true degenerations of the brain and cord.

As regards actual pathology, there is little ground to doubt that microscopic lesions may be present in cases which are unattended by any gross lesions of the spinal column or cranium. One able neurologist has made the following assertion: "There can be no doubt that injuries, even of moderate severity, such as falls, unattended by fracture, are capable of causing actual lesions of the nature of minute hemorrhages, necrosis of nerve elements, and perhaps of important and wide-spread vasomotor disorders and vascular degenerations." He further states that "the usual outcome of these lesions is, however, either in recovery or else in recognizable forms of inflammatory or degenerative processes, rather than in the neuroses and psychoses, properly speaking; though it occasionally happens that typical psychoses and neuroses constitute the only manifestations of such lesions."

Osler cites several cases as reported by Leyden, Edes, and Bernhardt, in which the symptom-complex of traumatic hystero-neurasthenia followed accidents of slight severity, and finally resulted in death. In one case a spinal pachymeningitis was found. In four cases degenerations of the pyramidal tracts were demonstrated. In two cases marked arteriosclerosis of the brain and cord could be shown, and in one of the latter cases a beginning multiple sclerosis was also detected. In none of these cases was there external evidence of traumatism, and in all save the one showing the pachymeningitis the brain and spinal cord gave macroscopic evidence of being in a normal condition.

The four cases reported by Edes manifested a marked general

tremor, and the symptoms followed immediately upon the traumatism.

Such cases as these just cited are very rare. Very few afford the opportunity of a post-mortem examination, because death is seldom the result of morbid conditions of this character. Osler states that no case of the kind with post-mortem has been recorded in this country, and it is his belief that the development of symptoms strongly indicating organic changes in the nervous system is quite exceptional, he himself never having encountered such a condition.

Instances in which traumatic neuroses of one form or another have followed mere fright or terror, without any bodily injury whatever, are quite numerous. The symptoms are frequently profound and lasting, and may be as severe as in those cases where the attending circumstances would lead to a stronger suspicion of organic trouble.

Time will not permit any rehearsal of the symptoms which may be met with in typical cases of post-traumatic neurasthenia and hysteria, since they differ in no essential particular from those encountered in cases dependent upon other causes. Partial or total loss of consciousness is frequently the immediate result of the accident, or the patient may be greatly agitated and excited; while not infrequently a condition of mental stupor is induced. Among the most interesting cases are those in which the injured person is calm and apparently undisturbed for hours or days after the receipt of the shock, but after the storm is over suddenly shows marked and profound hysterical or neurasthenic symptoms. The condition just mentioned shows that the clinical picture immediately following an accident is not always indicative of the kind or severity of the symptoms which may develop later on. After the first few weeks, if recovery has not taken place, the patient settles down into a chronic psychoneurotic condition, the symptoms of which conform in greater or less degree to one of the classes previously mentioned.

As has been stated, the symptoms of the third class do not strictly conform to any given type of disease. In fact, this group includes those cases which cannot be placed under the head of neurasthenia or hysteria, and oftentimes are strongly indicative of organic disease. In this group we often find an odd mixture of hysterical and neurasthenic symptoms. In some instances the superficial emotional tendencies of hysteria are in abeyance, yet there may be anesthesias, paralyses, and contractures. If to these hysterical manifestations be added the tender spine and general irritable

weakness of the neurasthenic, we have a disorder in which it is quite difficult to make an accurate diagnosis. In this class, also, would come those cases in which minute multiple hemorrhages and slight degenerations have taken place in the central nervous system. Undoubtedly these cases are accompanied by symptoms of considerable gravity; yet our knowledge of the effect of such lesions is at present insufficient to enable us to give any definite prognosis with respect to the duration of the morbid symptoms which they occasion. Those who have given the most careful attention to the matter seem to be of the opinion that the prognosis in these cases is no more grave than in cases where such lesions do not exist.

Aside from the neuroses which have just been discussed, we have a number of true organic nervous disorders which, it is thought, may be precipitated by traumatism or mental shock, and which must be excluded before we fall back upon the less satisfactory diagnosis of traumatic neurosis. Many persons are naturally predisposed to organic nervous disease, and the latent morbid tendencies are smoldering away from year to year, only waiting to be fanned into a flame by some extraordinary drain upon the nervous energy, similar to that brought about through the agency of some accident or excessive mental strain. As examples of these diseases we have tabes, general paralysis, neuritis, syringomyelia, exophthalmic goitre, epilepsy, and chorea. Typical psychoses may also be developed in like manner.

From a medicolegal standpoint the matters of diagnosis and prognosis in this class of disorders are of considerable importance, and are worthy of our most careful consideration.

With reference to diagnosis, the chief points to be considered are as follows:

1. The possible presence of gross physical injuries, such as contusions and lacerations of the muscles of the back, fractures, or dislocations of the vertebræ, and cranial fractures causing pressure or intercranial hemorrhage.

2. The possible indications of organic disease of the central nervous system.

3. The possible manifestations of true neurasthenia.

4. The possible appearance of the symptoms and stigmata of hysteria.

As a rule, little difficulty is experienced in determining the presence of gross physical lesions similar to those mentioned above. Contusions and lacerations of muscular tissue have their own symptoms and prognosis. Fractures and dislocations of the

vertebræ, with few exceptions, produce pressure upon the cord causing symptoms of myelitis, varying in degree of intensity in proportion to the amount of pressure or destruction of the cord. Cranial fractures, causing pressure as a result of depressed bone or cortical or extradural hemorrhages, are not apt to pass unnoticed, and the pressure symptoms are so plain that little difficulty should arise here.

The second point to be considered is much less easy than the first. The indications of organic disease of the central nervous system are not always thoroughly marked. Our knowledge of the motor and sensory tracts in the brain and cord enables us with a reasonable degree of certainty to place our mental finger upon the lesions which cause an obstruction to the outflow or inflow of impulses along their paths, but there are some of the classical nervous disorders, such as chorea and paralysis agitans, which have their characteristic train of symptoms, and yet are little understood as to the pathology which is underlying them. This makes it obligatory upon the diagnostician not only to be familiar with the symptoms which may be traced to definite portions of the brain or cord, but also to be acquainted with the manifestations of many other diseases which the clinician alone has been able to map out for our guidance. A careful study of the electrical reactions, trophic conditions of the muscles and skin, reflexes, rectal and vesical sphincters and special senses, combined with a thorough investigation of the muscle, thermal, pain, and tactile senses, will enable the examiner to determine quite certainly the presence or absence of gross degenerations in the cerebrospinal axis. If he will then go a step further and by careful deliberation exclude those classical disorders which are known chiefly by their characteristic symptoms, he will have brought himself to a point where he must discriminate between three morbid conditions, viz., multiple hemorrhages and degenerations in the brain cord, neurasthenia, and hysteria.

As our knowledge of the distribution and exact influence of the minute lesions first mentioned is not at all definite, and since such lesions are held to be insignificant as to prognosis, the diagnostician may as well content himself with the none too easy task of differentiating between traumatic neurasthenia and hysteria.

Modern scientists are inclined to look upon neurasthenia as a fatigue neurosis, and, indeed, clinical experience bears out this theory in all essential particulars. Holding in mind, therefore, the irritable condition of the nerve centers and their low stock

of potential energy, it will be much easier to recognize those symptoms which stand out so plainly in the case of most neurasthenics. A general irritable weakness of both mind and body, giving rise to fatigue, headaches, loss of mental activity, sleeplessness, hyperesthesias, etc., unaccompanied by real anesthesias, paralyses, and contractures, will cause a marked depression of the diagnostic scale beam upon the side of neurasthenia.

With reference to the recognition of traumatic hysteria little need be said. The previous history, more particularly with reference to the emotional nature of the patient, taken together with his or her environment preceding, at the time of, and subsequent to the traumatism, should point out the possible predisposing influences; while the presence of any of the accidents or stigmata should place a diagnosis upon a reasonably sure footing.

The matter of prognosis in this class of cases is in reality the most important part of the subject, since it most heavily bears upon the legal side of the question. We may say that the gross physical injuries previously indicated have their own prognosis, founded upon more or less definite clinical experience, and the courts are seldom at a loss with reference to the disposition of cases founded upon grounds which are so obviously just. The organic nervous disorders and those of classical type, which are sometimes precipitated by traumatism, likewise have their prognosis based upon extensive clinical observation.

The prognosis in traumatic neurasthenia depends largely upon the age, environment, and general physical condition of the patient, taken together with the gravity of the symptoms which follow in the first few weeks after the accident. A young person who has previously enjoyed good health, and whose condition shows marked improvement within four or five weeks, will almost certainly regain perfect health. Older persons, or those past middle life, especially those who are not ordinarily strong and robust, are apt to suffer from the effects of their nervous breakdown during the rest of their lives. Where the sufferer is a person of considerable means and is able to bear the expense of prolonged rest treatment, or of a sea voyage, etc., the prognosis is much better than it would be in a like case where lack of money prevents the following out of a line of treatment which has proven to be so highly beneficial.

It is impossible to enumerate all the contingencies which may influence the physician's prognosis in cases of this character, but in a general way it is safe to say that cases of profound neurasthenia following traumatism, in persons past middle life, or in

younger persons who show no tendency toward improvement at the end of two months, necessarily carry with them a bad prognosis as regards complete recovery.

Traumatic hysteria has no definite prognosis. The recovery of damages after a period of litigation, or the settlement of a suit one way or the other, often has a decided curative influence; not because the plaintiff has wilfully endeavored to rob the defendant, but because the suggestive influences of our court rooms, physicians, and overzealous friends have been removed. Complete recovery, however, is not always brought about in so simple a manner. Many persons have suffered throughout their whole lives from the hysterical taint which has gained entrance to their psychic life as the result of shock or sudden fear, and as a consequence have made life miserable, not only for themselves and their friends, but for the physician who has been unfortunate enough to have gained their confidence.

As a rule, the prognosis in this form of hysteria is much better than in neurasthenia, and because of the possibility of a removal of the symptoms after litigation has ceased, the expert must necessarily be guarded in his prognosis. It should be borne in mind, however, that hysteria, while it exists, is truly a disease, and is worthy of recognition as such. In point of fact there are few physicians who would not rather have a wife or a sister sustain a half-dozen fractures in preference to the induction of profound hysterical tendencies.

In conclusion, the writer wishes to place special emphasis upon the following points:

1. That nervous symptoms similar to those met with in traumatic hysteroneurasthenia may be noted as the result of sudden and intense mental strain, unassociated with traumatism.

2. That clinical experience and a few isolated post-mortem findings indicate that microscopic lesions of the brain and cord may result from traumatism without external evidence of violence.

3. That although we know these minute lesions are often present, our knowledge of their effect is as yet insufficient to enable us to differentiate between cases in which they do or do not exist, and that their possible presence does not necessarily influence our prognosis.

4. That hysteria must be looked upon as a true disease, which may be brought on by traumatism, and which may bring more trouble into a home than a broken limb or a sprained back.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

PUBLIC OPINION AND THE MILK SUPPLY.

In the propaganda for clean milk now being stimulated all over the country by public health boards, laboratory work, and field crusades, the medical profession must necessarily and very properly take the initiative. The universal employment of cow's milk as an article of diet and its paramount importance as a means of nourishing invalids and children make it absolutely essential that this staple should be furnished the consumer not only unadulterated and up to the standard in solids, but that it should also be free from pathogenic bacteria.

The medical profession pretty thoroughly understand that milch cows should have proper care, feeding, and stabling; that the cows should be clean, the hands, person, and clothing of the milker should be clean, and that the milk should be received in a clean vessel from the cow. The medical profession understand that if the milk receives proper care on its journey from cow to consumer and is delivered reasonably fresh, the number of bacteria present will be relatively small. They also understand the converse of this proposition, that milk contaminated at the milking place or during transportation, milk not properly cooled, and milk unduly delayed in its delivery to the consumer, is sure to contain bacteria in large numbers.

City and State boards of health have done much good work in connection with this problem. To the chemical examination of milk they have added the bacteriological. For a long time it was known that milk containing specific pathogenic bacteria might carry the disease of which such germs are the causal factor. It remained for Parke to discover that the so-called non-pathogenic germs if present in milk in excessive numbers might destroy the nutritive value of the milk and cause serious trouble in the intestinal tract, when administered to infants or invalids. With highly

commendable zeal, municipal boards of health are taking up this matter of bacteriological analysis with restrictions based on the number of bacteria in each cubic centimeter. It will cost a little more to furnish a pure milk containing a small number of bacteria, but the milk will have a sufficiently increased nutritive value to more than counterbalance the increased cost of production. It is a question not easily determined just how much more than impure milk clean milk should cost. Milk dealers are claiming that it will be very much more expensive, but some allowance must be made for the average milkman's cupidity. No doubt the first cleaning up will be expensive, but the milk dealers ought to stand some of the expense. The Augean stables were dainty and wholesome in comparison to some of these modern dairy outfits, and we must pay union prices for union labor instead of having at our command the strong arm of that willing stableman Hercules.

But once the production and distribution is put on a clean basis, about the only increased expense over present methods should be in the matter of refrigeration. It is not so expensive to keep clean as it is to keep cool.

However, with all the increase of our knowledge about milk, its proper production, care, and distribution, any large amount of success in this crusade must be dependent upon an educated public opinion, and this opinion must be educated by physicians. When the general public is fully informed of the value of pure milk, producers and dealers will be glad to yield to the general pressure and supply the sort of milk for which there is a demand. All legislation, too, to meet with any marked success must be backed by an educated public opinion, and this training none can so well initiate and carry out as the members of the medical profession.

EDITORIAL NOTES.

The Specific Treatment of Cancer.

The latest claimant for the attention of the profession in regard to the curing of cancer is Dr. Otto Schmidt, of Cologne. After many years of research this investigator has succeeded in cultivating artificially a parasite hitherto unknown and at least more or less undescribed. It fulfils most of the conditions necessary to prove its specificity, and was found in every malignant growth examined.

The causation of cancer is now held by the majority of clini-

cians to be parasitic. It is upon this theory and the discovery by him of a parasite that Dr. Schmidt's treatment is based.

The rationale of the treatment is twofold: First, active immunization—that is, by the injection of cultures, fourteen to twenty-one days old, which have been just killed by the application of heat (65° C.); and secondly, passive immunization by the injection of the serum of immunized animals, sheep and horses, into the subcutaneous tissues of cancer patients.

The most constant and striking result of the injections into the body of a cancerous patient is a specific reaction in the tumor and infected parts. Injections into healthy subjects of Dr. Schmidt's serum produce no results whatever.

Schmidt has used his serum in a long series of cases, and in each one has shown a cessation of growth. Dr. Schmidt makes no extravagant claims in regard to his treatment, but hopes that the lapse of time will prove the truth of his procedure.

It is sincerely to be hoped that this serum will prove of permanent value in the treatment of cancer, and that we are on the threshold of solving that which has been the pathological mystery of the ages.

A New Vice Among Soldiers.

As a result of the South African war a new form of narcomania has been discovered. The details of the method are given by an English army surgeon in a recent number of the *British Medical Journal*. It consists of the eating of cordite with which the Lee-Metford cartridges are charged, and the effects are about as unpleasant as it is possible to imagine. Cordite consists of nitroglycerin, guncotton, and a small percentage of mineral jelly. Its taste is sweet and pungent. Dissolved in tea it produces an almost immediately exhilarating effect. Following this a deep sleep is produced lasting from five to twelve hours. On awakening there is experienced a dull headache, accompanied by muscular twitching and protrusion of the eyes. Its consumption excites a quarrelsome, destructive mania in an otherwise peaceably disposed individual. The inception of the habit is given by the fact that a large number of men used it to light their pipes. In this manner it gives the tobacco a sweetish taste. Cordite used in beer or spirits seems to brutalize the mildest man and to make a temporary maniac of him. Owing to its exceedingly bad effects it is not likely that this new vice will gain a very strong foothold among soldiers who use this particular make of cartridges.

ITEMS AND NOTES.

THE epidemic of diphtheria in Auburn is abating.

HARPER HOSPITAL, Detroit, Mich., has opened new operating-rooms, completely equipped at a cost of $60,000.

THE government of Chili has provided for the appropriation of $5,000,000 to establish a drainage and sewerage system in the city of Santiago.

THE Empress of Russia is suffering from suppurative otitis media, and some alarm is expressed in St. Petersburg lest the inflammation spread to the mastoid cells.

ACCORDING to a circular just issued by the health department the death-rate from pulmonary tuberculosis in New York City has fallen from 4.2 per 1000 in 1881 to 2.29.

DR. NICHOLAS SENN, who was reported as seriously ill with septicemia from an infected operation wound of the right hand, has returned to Chicago and is reported much improved.

THE College of Physicians and Surgeons, of Boston, Mass., an institution founded in 1880, will, it is said, soon become the medical faculty of Brown University of Providence, R. I.

THE next meeting of the American Therapeutic Society will be held in New York City, June 2, 3, and 4, 1904. N. P. Barnes, Secretary, 212 Maryland Avenue, N. W., Washington, D. C.

AT the October meeting of the State Board of Examiners in Medicine and Surgery, the Michigan College of Medicine and Surgery, Detroit, was taken from the list of accepted schools.

DR. MAXIMILIAN HERZOG, for more than seven years professor of pathology and bacteriology in the Chicago Policlinic, has been appointed pathologist in the Bureau of the Government Laboratory, Manila.

THE secretary of the California State Board of Health reports a death from plague November 6. The patient was a Chinaman, and died on the river steamer *J. D. Peters,* between Bouldin Island and San Francisco.

SEVERAL patent medicine companies in Kalamazoo which have manufactured and exploited alleged cures for consumption have recently discontinued business, the reason given for the closure being pressure said to have been brought to bear by the United States government for fraudulent use of the mails.

FRENCH surgery has just suffered a great loss by the early death of Dr. Brun, professeur-agrege in the Faculty of Medicine of Paris and surgeon to the Sick Children's Hospital. Born at Angoulême in 1854, Felix Brun was appointed chirurgien des hôpitaux in 1885, and the following year, at the age of thirty-two, was appointed professeur-agrege.

DR. WILLIAM OSLER, accompanied by a delegation from the American Medical Association, petitioned the President on November 25 to appoint a member of the association as one of the interoceanic canal commissioners, urging that the presence of a competent physician would be of great value to the government. The president has not yet acted upon the request.

SOME days ago diphtheria broke out among the inmates of the New York State Reformatory at Elmira, and within a week there were fifty cases and three deaths, among those attacked being the assistant resident physician and others of the official staff. On November 10 the superintendent submitted every inmate of the institution to antitoxin, and on the following day it was reported that the epidemic had been completely checked.

As a result of three deaths of colored persons in Philadelphia from smallpox, without medical attendance, both the police and health authorities of Philadelphia are inaugurating a vigorous campaign against the responsible persons. It has been learned that several religious sects have been instrumental in withholding medical aid. One of their places of meeting has been closed by the board of health, and the principals are being looked for by the police.

THE three negroes from the Congo exhibited at the Paris Académie de Médecine are attracting much interest. They spend most of their time in bed, but do not suffer at all, and are confident that they will soon be cured. Each has a remarkable appetite and digestion is good. The Association des Dames Francaises has placed its small hospital at the service of the Institute of Colonial Medicine, and the negroes are cheerful in their new surroundings.—*Exchange.*

In the United States the excess of births over deaths was 28 per 1000 in 1830; to-day is 13. The French rate was 25 in 1874, 22 in 1894, and 21 to-day, or a drop of 4.3 during the period for which returns were available. During the corresponding period the English rate has fallen 6, the Italian 3.2, in Germany 4.2. In Russia the rate is advancing; it was 47.7 in 1892, and is over 49 to-day. In Australia the rate is falling most alarmingly; in 1861 it was 41.9, and to-day it is but 27.35.

An exchange says: "The assuring news comes through consular sources that vaccination is effective against the historic plague. In Hong Kong, where superstition prevails, the efforts of the authorities to stamp out the trouble have been ineffectual, and the scourge is unabated. On the other hand, in Manila, where preventive vaccination is compulsory and carried out conscientiously on a large scale, the plague is almost stamped out. It is asserted that the vaccination in use there, if repeated at intervals of ten days, is as certainly effective as vaccination against smallpox."

Dr. Loebl, of Vienna, in a communication to the *Gesellschaft der Aerzte* reported some encouraging results in the treatment of sepsis and thrombophlebitis with Credé's argentum colloidale administered as a clyster. He used this colloid silver solution—"collargol," as it is called—twice a day for a week in quantities of from 15 to 30 centigrammes in 75 grammes of distilled water. The clyster has the same effect as an intravenous injection, but is much easier to employ and is free from all risk. This treatment in apparently hopeless cases of sepsis led to many recoveries.

A jury in the Lord Chief Justice's court has awarded Dr. Bayliss, a professor of London University College Hospital, $10,000 damages for libel against the Hon. Stephen Coleridge, honorary secretary of the National Antivivisection Society, and son of the late Chief Justice Coleridge. Mr. Coleridge publicly charged the plaintiff with torturing a dog while carrying out vivisection experiments without proper anesthetics. Mr. Coleridge's charges rested on the statement of two Swedish women students, who gave a horrible picture of the laboratory of the college and the inhumanity of the operators, dogs howling in agony from the tortures inflicted on them while they were fully conscious. Strong evidence was submitted against the allegations.—*American Medicine.*

THE members of the Vienna medical chamber, says the correspondent of *American Medicine,* to which is entrusted the professional control of the doctors of the city, have resigned in a body as the result of a long fight between the antisemite members of the Landtag and Count Kielmansegg, governor of Lower Austria, on one side, and the general body of the Vienna physicians and university professors on the other. The conflict arose over the question of vivisection, several members of the Landtag accusing the doctors of contravening the vivisection law in their own experiments upon animals, and also alleging that the doctors experimented upon poor patients, inoculating them with the germs of noxious diseases. The doctors declare that the charges are grossly exaggerated, and refer to cases which were investigated more than ten years ago. Dr. Palitzer, made angry by the accusations against him, has resigned his position as physician to the Vienna poor, which he had filled without remuneration for forty years.

REPORTS from all parts of the British empire show, says the *Journal of the American Medical Association,* that the anti-mosquito campaign is being carried on with the most gratifying success. At the opening meeting of the Royal Colonial Institute, Major Ronald Ross pointed out that in the once deadly colony of Lagos, thanks to the zeal of Sir W. MacGregor, the governor, who is a doctor, malaria has lost its terrors. The difficulties to be contended with were great, for Lagos itself is built on a low, swampy territory, and surrounded by dense forests. In the medical report of Hong Kong for 1902 the deaths of the Chinese from malarial fever are stated to have been 887 in 1900; 541 in 1901; and 303 in 1902. But perhaps the most striking and rapid results have been obtained at Ismailia, on the Suez Canal. In a little over six months one class of mosquitoes was practically banished from the town, and coincidentally the amount of malarial fever diminished. In the first six months of the present year there were only three cases in hospital, against fifty-two for the same period of last year.

DR. MARMOREK, says the *Journal of the American Medical Association,* has long been connected with the Pasteur Institute at Paris as chief of the chemical laboratory.. During the past year he has been experimenting with an antituberculosis serum whose effects on lower animals have been so good that he is encouraged to propose it for the treatment of humans. The other scientists connected with the Institute refused to sanction

its publication at this early date and wished to wait for further experience. Marmorek has consequently withdrawn from the Pasteur Institute, and read a communication before the Académie de Médecine on November 17, describing his technique and results to date. The Bulletin for that meeting has not yet been received. His communication had been announced for November 10, but Roux, of the Pasteur Institute, secured its withdrawal. On deliberation, however, the Académie gave audience to Marmorek at the following meeting. Roux stated that the results of control tests at the Pasteur Institute were entirely opposite to those which Marmorek asserts to have obtained. A cable despatch from Paris in the daily press of December 2 announces that Prof. G. Dieulafoy reported to the Académie that he had tested the Marmorek serum on seven patients, Marmorek operating. Instead of becoming better, he says, they became worse and five died. Le Dentu made a similar report.

The committee on the Senn medal begs leave to call attention to the following conditions governing the competition for this medal for 1904: A gold medal of suitable design is to be conferred on the member of the American Medical Association who shall present the best essay on some surgical subject. The award will be made under the following conditions: (*a*) The name of the author of each competing essay must be enclosed in a sealed envelope bearing a suitable motto or device, the essay itself bearing the same motto or device. The title of the successful essay and the motto or device is to be read at the session at which the award is made, and the corresponding envelope is to be then and there opened and the name of the successful author announced. (*b*) All successful essays become the property of the association. (*c*) The medal shall be conferred and honorable mention made of the two other essays considered worthy of this distinction at a general meeting of the association. (*d*) The competition is to be confined to those who, at the time of entering the competition, as well as at the time of conferring the medal, shall be members of the American Medical Association. (*e*) The competition for the medal will be closed on and no essays received after March 1, 1904. Communications may be addressed to any member of the committee, which consists of the following: Dr. James H. Dunn, chairman, Minneapolis; Dr. M. L. Harris, 100 State Street, Chicago; Dr. Floyd McRae, Atlanta, Ga.

NEW PUBLICATIONS.

PRACTICE OF MEDICINE.

This is a complete, well written manual on the practice of medicine. It is not unnecessarily cumbersome in size, but discusses with fulness all the subjects treated of in more extended treatises. It is written in the spirit of all that is modern and scientific. It is well illustrated and indexed, and forms a useful and acceptable manual for student or physician.

A Text-book of the Practice of Medicine. Designed for the use of students. By James Magoffin French, M.D. Large 8vo, 800 pages, illustrated by ten full-page plates in black, colors, and tints, and fifty wood engravings. Muslin, $4.00 net; leather, $4.75 net.

NON-SURGICAL TREATMENT OF THE PROSTATE.

The author has commented at considerable length upon methods of treating the prostate other than surgical. His predilection appears to be for electrical methods of treatment, and he describes the various instruments and devices he employs. The work is one which is suggestive and practical.

A Non-surgical Treatise on Diseases of the Prostate Gland and Adnexa. By George Whitfield Overall, A.B., M.D. Chicago: Marsh & Grant.

THE MEDICAL RECORD VISITING LIST.

The time for visiting lists has again come round, and among the candidates for public favor this one is among the most deserving. It contains more than the usual quantity of useful information, tables, and dose lists. The financial pages will be found to be compiled in convenient manner for the keeping of physicians' accounts.

The Medical Record Visiting List and Physicians' Diary for 1904. New York: Wm. Wood & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Operative Treatment of Bilateral Cicatricial Ankylosis of the Jaws.

In cicatricial constriction of the jaw, the operative treatment, according to R. Matas (*Journal of the American Medical Association,* Nov. 28, 1903), must be guided by a full knowledge of the seat of the constricting bands, their extent, their density, and their association with secondary developmental defects or associate lesions in the osseous, articular, and muscular apparatus of the lower jaw. The age of the patient, the cause of the lesion, duration of the trismic condition, the seat and extent of the cicatrices, whether extra- or intra-buccal, are the important elements in determining the final results of the operative treatment.

The most intractable and difficult cases are those in which the lesions are symmetrical and bilateral, which begin in inflammatory and necrogenic processes in the mucous membrane of the retrovestibular and pterygoid regions of the mouth in early childhood, and are neglected until atrophic, degenerative, and developmental changes in the maxilla and its condyle have taken place.

The best results are obtained by early and persistent treatment.

In the complex and neglected cases of the class referred to (intra-buccal) no single operative method is sufficient to obtain permanent relief. The cases involving the anterior portion of the mouth and cheek are the most favorable for treatment, and the simple method of division of the cicatrices suggested by Mears will probably suffice. In the deeper or retrobuccal cases, a combination of methods, including autoplastic skin transplantations, osseous sections, with the creation of a unilateral pseudarthrosis (Esmarch) with or without myoplasty, will be required to obtain a moderate but advantageous degree of motion of the lower jaw.

Simple plastic operations to replace the lost mucous membrane by transplanting skin are necessary, but not sufficient in the deeper posterior bilateral cicatricial contractions. They must be regarded solely as adjuncts to the formation of a pseudarthrosis.

In making a false joint by Esmarch's or Rizzoli's method it is important that the procedure should be limited to one side only, because a bilateral pseudarthrosis will result simply in increasing the mobility of the intervening fragment, with loss of voluntary control. The best results are obtained by unilateral pseudarthrosis, combined with bilateral plastic dermal transplantations, to which may be added, in the gravest cases, excision of the maxillary condyle on the side opposite the pseudarthrosis, without damaging the temporal pterygoid or masseteric attachments.

By the combination of the methods above presented and a prolonged course of maxillary gymnastics following osteoplasty, functional results may be obtained, even in the most forbidding cases, without however the expectation of attaining the surgical ideal, either as to cosmetic or functional results.

Extraction of a Bullet in Contact with the Left Auricle of the Heart.

At a recent meeting of the Paris Society of Surgery, M. Tuffier (*Lancet,* Nov. 7, 1903) showed a non-commissioned officer at the age of twenty-four who had received a pistol shot in the front of the chest at the attack on Figuig in March, 1903. He had been lying almost flat on his horse, so that the direction of the bullet was from above downward. Notwithstanding this wound he was able to remain on horseback for half an hour, when he was overcome by extreme difficulty of breathing. After he was taken to the ambulance station a small wound was found on the left side of the sternum, and on the same day he had slight hemoptysis and fits of dyspnea. In the course of some days all this passed off and the patient returned to duty. Two months later he began to suffer from difficulty of breathing and attacks of dyspnea, for which he was admitted into the hospital at Mustapha, and was then sent to Paris. Here he came under the care of M. Tuffier, who decided on operating after he had for a long time observed the inutility of various kinds of medical treatment for cardiac trouble. Radioscopy on several occasions showed the presence of the bullet and its intimate relation to the left auricle, all the movements of which it followed. After incision of the integuments and the intercostal space M. Tuffier found, by means of Contremoulin's needle, that the bullet was at a depth of five centimeters (two inches). He then resected the second costal cartilage, and the pleural sac being pushed inward he could with

his finger feel the bullet evidently attached to the auricle. It was on the surface of the auricle without being encapsulated, and nothing further was required to be done in order to extract it, after which symptoms disappeared.

Surgical Hints.

The November number of the *International Journal of Surgery* contains the following surgical hints:

Whenever possible resort to anesthesia for the inspection and dressing of severe injuries. It allows the surgeon to take more time, as he is not afraid of hurting the patient; hence he can make a more thorough examination and apply a more efficient dressing. The elimination of pain will also do much toward preventing shock.

It is well to remember that many fractures, including cases of Colles's, cannot be placed in accurate apposition without anesthesia, not only on account of the pain, but because absolute muscular relaxation may be indispensable.

Never administer morphine to a patient who is unconscious or in whom the element of pain has practically been abolished by shock. It will deepen these conditions and distinctly increase the danger.

Never anesthetize a patient suffering from fracture without first seeing that he will be unable to injure the fractured limb if he struggles. The limb should be well retained by a splint, or carefully fastened to the table, or held by an assistant. A dose of morphine a half-hour before anesthesia will diminish the struggles if there is no contraindication to its use.

Generally speaking, fibroid tumors in women near the menopause, which give rise to no dangerous hemorrhage, should be left alone. Myomectomy should be limited to younger women still able to reproduce, and to cases in which there are profuse hemorrhages.

The Surgical Problem in Prostatic Hypertrophy.

G. W. Hawley (*Annals of Surgery*, November, 1903) reaches the following conclusions in regard to the problem of prostatic hypertrophy: (1) That it is not the prostate but the adjacent urinary tract that demands relief. (2) That the direct cause of interference with micturition is the displacement of the outlet and

floor of the bladder due to enlargement of the retrourethral portion of the prostate. (3) That until the precise cause of this overgrowth is known and successful preventive measures found we can only hope to relieve by correcting the displacement. (4) That until an effectual method is found sufficiently safe and simple for application before infection and disorganization of the urinary tract has resulted, surgery cannot effectually relieve. (5) That the logical mode of correcting vesicourethral displacement is by reduction is shown by the fact that operative methods improve urination by virtue of their power to reduce more or less this displacement. (6) While some of these methods partially or sometimes completely accomplish reduction with comparative safety and others entirely reduce the displacement, but at considerable risk, none does so with both safety and success. (7) That since the reduction of the vesicourethral elevation is essentially a mechanical problem, a reduction based on anatomic and mechanical principles would be safest and simplest.

Spontaneous Gangrene of the Extremities.

Wartburg (*Beiträge zur klin. Chirurgie,* 35 Bd.) reports fifty-two cases of spontaneous gangrene of the extremities, dividing them as follows: (1) Embolic gangrene (3 cases) following endocarditis, with a bad prognosis in every case. (2) Gangrene angiosclerotica during the course of or convalescence from infectious disease; in these the heart plays no part, but it appears to be a localized disease of the endothelial lining of the vessels accompanied by pain and endarteritis obliterans. (3) Senile gangrene following endarteritis deformans; in these there was pain preceding the gangrene, full pulse, and normal temperature (32 cases). (4) Diabetic gangrene, practically the same as No. 3, following the arteriosclerosis of diabetes (8 cases).

Diagnosis and Treatment of Injuries of the Spine.

W. J. Means (*International Journal of Surgery,* November, 1903) says that all injuries of the spine, no difference how slight, should be carefully examined by the surgeon when the patient presents himself.

Owing to the frequency of secondary developments, a guarded prognosis should always be given.

There are no positive signs of a complete severance of the cord in the primary stage of an accident.

The treatment of injuries to the spine, other than operative, consists primarily of rest in a horizontal position, applications of cold, attention to the bladder and rectum; secondarily, massage, galvanism, and stimulating solutions.

A laminectomy, made after the reaction from shock, is not a dangerous operation.

A laminectomy is the only rational treatment for pressure on the cord from blood-clot or depressed bone.

Relief may follow a laminectomy which has been made several months after the inception of the injury.

Surgical Treatment of Ascites in Cirrhosis.

Zesas (*Deutsche med. Wochenschrift,* 1903, No. 27) says the fact that nature by means of a collateral circulation endeavors to control ascites in cirrhosis led to the origination of the so-called Talma operation. The author reports a case, and urges that the operation be performed as early as possible whilst the liver cells are still capable of function. It is also applicable to all forms of portal obstruction. The collateral circulation is brought about by causing the adhesion of the various abdominal organs with the diaphragm or abdominal wall. The author especially urges that the spleen should be included in this operation on account of its great vascularity.

Exostosis of the Spinal Column.

Alfred Exner (*Berliner klin. Wochenschrift,* No. 38, 1903) reports a case in a man aged twenty-two years who had a tumor in the left lumbar region. The examination showed a flattened elevation rising from the fourth lumbar vertebra four inches to the left of the median line, which was more pronounced in the upright position; it was about the size of a hen's egg. On account of the probability of a sarcoma of the muscles the patient was operated on, and a bony projection was found attached to the fourth lumbar vertebra measuring 1½ by 4 centimeters. This exostosis was covered at its extremity by two millimeters of cartilage, and a number of muscle fibers were inserted into its periosteum.

MEDICINE.

The Etiology of Sleeping Sickness.

Colonel Bruce (*British Medical Journal,* Nov. 21, 1903) makes the following summary of conclusions in regard to this affection:

1. That sleeping sickness is caused by the entrance into the blood and cerebrospinal fluid of a species of trypanosome.

2. That this species is probably that discovered by Forde and described by Dutton from the West Coast of Africa, and called by him *Trypanosoma gambiense.*

3. That the so-called cases of trypanosoma fever described from the West Coast may be, and probably are, cases of sleeping sickness in the earliest stages.

4. That monkeys are susceptible to sleeping sickness, and show the same symptoms and run the same course, whether the trypanosomes injected are derived from cases of so-called trypanosoma fever, or from the cerebrospinal fluid of cases of sleeping sickness.

5. That dogs and rats are partially susceptible, but that guinea-pigs, donkeys, oxen, goats, and sheep up to the present have shown themselves absolutely refractory.

6. That the trypanosomes are transmitted from the sick to the healthy by a species of tsetse fly, *Glossina palpalis,* and by it alone.

7. That the distribution of sleeping sickness and *Glossina palpalis* correspond.

8. That sleeping sickness is, in short, a human tsetse-fly disease.

Changes in the Central Nervous System Produced by Whooping-cough.

R. Nemath (*Lancet,* Nov. 21, 1903), making researches on whooping-cough, found that various clinical symptoms were produced by it, including cramps and paralysis in the motor nerves and muscles, convulsions, palsy of cerebral, spinal, or peripheral origin, psychoses and neuroses, disturbances in the functions of special sense, meningitis, and sometimes sclerosis disseminata multiplex. Post-mortem hemorrhage in the brain or meninges,

together with some other lesions, may be found. Dr. Nemath found in sixteen out of seventeen investigated cases that the pia mater and arachnoid were very much thickened (more than six times as thick as normal), a new proliferation of connective tissue and lymphocytes penetrating the meninges; there were also many hemorrhages in the pia mater and between the meninges and the brain. He was able to see in the gray substance of the brain dilatation of the lymphatics, edema, hemorrhages of varying intensity, hyperemia, and accumulation of white blood-corpuscles along the vessels. In some cases edema of the meninges preponderated, and in others edema of the brain. It was quite impossible to find microörganisms either microscopically or by culture methods. There was a surprising correspondence between the clinical symptoms and the result of the histological examination of the meninges and the brain. Cases with highly developed nervous symptoms, convulsions, phenomena of brain pressure, and somnolency showed the above described histological changes, especially the accumulation of new cells in the meninges.

A Contribution to the Knowledge of the Course of the Lymph Stream in the Spinal Roots and Cord.

David Orr (*Review of Neurology and Psychiatry,* October, 1903) says that although bacteria have little tendency to spread along the nerves, their toxins can be carried in the lymph stream and exert their influence some distance from their source of origin.

In the spinal roots the flow of lymph is upward toward the cord.

Of the lymph flowing up the posterior roots, the greater part passes into the posterior columns, while a small quantity flows into the lymphatic spaces of the pia-arachnoid covering the posterior and lateral regions of the cord.

Where the fibers enter the cord, at which point their sheath and neurilemma are lost, they are especially vulnerable to the influence of toxins in the lymphatic system of the roots and meninges. This applies to both sensory and motor nerves. The last two conclusions are important in view of the recent opinion expressed by Marie and Guillain on the etiology of tabes, viz., that this disease is due to a lesion—probably syphilitic—of the lymphatic system constituted by the posterior roots, pia, and cord.

The course of the lymph stream in the posterior columns is ascending.

The lymphatic system of the posterior columns does not communicate with that of the lateral columns.

Tuberculosis of the Urinary System in Women.

Guy L. Hunner (*Charlotte Medical Journal,* November, 1903) says that urinary tuberculosis in women is a disease of early adult life. It is usually primary in the kidney, although a majority of the patients complain first of bladder symptoms.

It is confined to one side in the vast majority of cases. If involving both sides, a very painstaking examination must be made of the separate urines to determine whether the treatment should be surgical or medical.

The disease should be kept in mind in dealing with any symptoms referable to the urinary tract; even such common occurrences as a supposed movable kidney or incontinence of urine should be carefully investigated.

Appendicitis and gall-stone colic must be differentiated. Any obscure or atypical case of supposed malaria or typhoid fever should remind one of this disease.

The disease is compatible with a long period of comparative health, and macroscopical and microscopical examination of our specimens shows that in some cases there is a tendency to spontaneous healing; but in spite of these two facts a careful study of thirty-five cases shows the disease to be preëminently surgical.

Yellow Fever Aboard Ships.

F. N. Wieter (*Journal of the Association of Military Surgeons,* October, 1903) says that persons on board of a ship anchored at some distance from shore in a yellow-fever port may become primarily infected with yellow fever, without having set foot on shore. The infection thus caused has been traced, directly or indirectly, to the taking in of stores and provisions. Secondary cases have frequently happened on board ships at a considerable distance from shore. These continued after the ships left port. Epidemics on board men-of-war have been prevented by the timely isolation—sending on shore—of early cases. In some instances an epidemic has not developed on ships after yellow fever had appeared, even when it was impossible to send

the sick away from ship in the very beginning of the attack. First cases have occurred from the sixth to the twelfth day after leaving port. Transferring a ship's crew from an infected vessel to an uninfected vessel put a sudden end to the epidemic. The sick transferred from an infected vessel do not necessarily cause new foci. Freezing a ship for an extended period, combined with repeated fumigations, under special conditions does not necessarily kill the morbific agent.

The Anemias of Infancy.

C. Riviere (*Lancet,* Nov. 21, 1903) sums up his conclusions as follows:

1. That anemia from any cause in infancy, if severe enough, gives rise to the peculiar symptoms grouped under the headings "anemia splenica infantum" and "anemia splenica pseudoleukemica" of von Jaksch.

2. That consequently these are not specific blood diseases, but owe their peculiarities merely to the "infancy factor," and that they represent merely different stages of the same condition.

3. That the common cause of severe anemia in infants is gastrointestinal catarrh, leading to the absorption of toxins either from the growth of microörganisms or possibly from the formation of poisonous by-products of digestion.

4. That leukemia of infants is not a separate disease, but merely a still more advanced stage of this anemia—that is, the difference between them is one of degree and not of kind.

5. That leukemia of adults is a return to the condition of an infantile anemia, and that, being rare, its causation is probably so narrowed down as to be practically specific.

The Etiology of Yellow Fever.

James Carroll (*Journal of the American Medical Association,* Nov. 28, 1903) believes he is justified in making the following conclusions:

1. The fusiform stage of the so-called Myxococcidium stegomyiæ of Parker, Beyer, and Pothier (1903) is not connected in any way with the transmission of yellow fever.

2. This organism appears to be not a protozoan parasite, but a yeast fungus. In its fusiform stage, the only form in which it was constantly present, it shows the characteristic budding, stain-

ing affinities, and vacuolation or spore formation of a blastomycete, and it is found with considerable regularity in both male and female mosquitoes that have purposely been fed on overripe banana to which a pure culture of a wild yeast had been added in the laboratory.

3. The organism has not hitherto been found in repeated examinations of mosquitoes of the genus Stegomyia that have bitten yellow fever patients in the early stages of the disease, when such insects had been fed only on blood, dry sugar, and water. This statement applies also to mosquitoes that are known to have reproduced the disease in human beings.

Mycotic Diarrhea or Gastroenteric Infection.

Frank Bates (*Texas Medical Journal,* November, 1903) says that no case of diarrhea in children should be neglected, but treated in its incipiency. This will reduce the percentage of the severer cases, and also the mortality. The nervous symptoms are often misleading, and seldom do we have meningitis with cholera infantum. Saline solution is one of our best remedial agents in the treatment of toxic conditions, much neglected. It is the best way to replace the loss of fluids to the body. Remember that we are not treating an inflammation but an intoxication, and that the indications are to stop the ingress, assist the egress of the toxin, to neutralize the effects of the same, and support the strength of the patient. Dietetics and hygiene are the sheet-anchors in rearing infants.

Food Adulteration.

W. G. Tucker (*Medical Review of Reviews,* October, 1903) after discussing the various forms of food adulteration says that unnecessary legislation should be discouraged. So far as possible we should endeavor in framing food laws to define articles precisely and prescribe definite standards of quality or purity to which they shall be required to conform. There are few articles likely to be employed in foods the use of which under all circumstances should be absolutely forbidden. It would be better to designate the foodstuffs in which they may be used. Proper and honest labeling of food articles should be encouraged, and so far as practicable required by law.

Destruction of Tubercle Bacilli in Milk.

Rullman (*Münch. med. Wochenschrift,* No. 31, 1903) obtained, in opposition to Dr. Hesse's statement that by pasteurizing milk for twenty minutes at 60° C. with constant agitation all tubercle bacilli present were destroyed, the following results: Several samples of milk infected with tubercular sputum were heated for half an hour at a temperature of 65° C., being constantly agitated; these samples were then injected into the peritoneal cavities of guinea-pigs, all of which after two months developed a miliary tuberculosis. The exact time required to kill the tubercle bacilli by pasteurizing at 60° C. the author is at present not prepared to state, although he has clearly demonstrated that a half-hour exposure is insufficient.

Pneumococcus Agglutination.

Jehle (*Wiener klin. Wochenschrift,* 1903, No. 32) in his observations of six cases of croupous pneumonia, and using as a control blood serum of ten other diseases, which all proved negative, obtained the following: In all cases ending in crisis a high agglutinative reaction was observed; this was accompanied by a decided leucocytosis and a diminution of chlorides in the urine. The agglutination sets in at the onset of the disease and remains constant until the crisis; as the disease progresses there is no increase but rather a decrease in the reaction, and after crisis it rapidly disappears, so that in forty-eight hours but a trace of it remains.

The Results of the Haffkine Plague Prophylactic.

B. R. Slaughter (*Johns Hopkins Hospital Bulletin,* November, 1903) says that the use of Haffkine's prophylactic serum renders a person immune for three months. It acts on them twenty-four hours. When inoculation is given in the stage of incubation of the disease—*i.e.,* before signs of plague appear—it has in many cases the power to avert the disease.

Inoculation has no effect on other diseases, except possibly eczema, which appears to be benefited by it.

Inoculation confers a high degree of immunity and greatly reduces the number of plague attacks.

When in spite of inoculation a person is attacked, his chances of recovery are greatly increased.

THERAPEUTICS.

The Hypodermic Use of Mercury in Syphilis.

S. P. Collings (*Interstate Medical Journal,* November, 1903) says that after considerable experimentation he has adopted the following solution of the bichloride of mercury made up in two-per-cent solution of chloretone.

Hydrargyri bichloridi, c. p..gramme 0.50, grs. vijss.
Sodii chloridi.....gramme 0.25, grs. iv.
Aqua destil.....grammes 4.00, f3j.

Mix. Ft. sol. (gentle heat).

Chloretone .....gramme 0.50, grs. vijss.
Aqua destil .....grammes 20.00 f3v.
Absolute alcohol .....gramme 1.00, min. xv.

Dissolve chloretone in 20 Cc. distilled water, add alcohol, and finally add hydrg. and sodii sol. Shake well and filter.

In administering the injections, one must be guided largely by the effects. Ordinarily a patient will stand ten minims every day for four to six days; then a larger dose should be given every second or third day, or possibly once or twice a week, as the symptoms demand. The post-trochanteric region should be selected for the injections, and they are given deep into the muscular tissue. The skin should be disinfected by being briskly rubbed with a piece of sterilized or carbolated gauze saturated with alcohol. The syringe most convenient to use is known as the "Sub Q" syringe. It is made entirely of glass, with an asbestos packing, so that it may be frequently boiled. The needle the author uses is a platinoiridium needle, which does not corrode or rust, and should be long enough to reach deeply into the muscular tissue.

Collargolum by Intravenous Injection in Erysipelas.

The favorable reports on the intravenous use of collargolum in various infections induced W. Coleman (*Medical Record,* Nov. 2, 1903) to try the drug. The results were sufficiently encouraging, especially in erysipelas, to warrant publication.

He used doses of 5 to 10 cubic centimeters of a one-per-cent aqueous solution. All who have used collargolum agree that it is harmless. As to technique, any sterilizable 10 cubic centimeter syringe is suitable. The veins at the elbow-bend are the most convenient. The site should be sterilized and covered with gauze until the needle is inserted. A bandage tied about the arm brings out the veins. If they do not appear readily, the arm

should hang over the edge of the bed for a few minutes. In no case was it necessary to cut down to the vein. A hypodermic size needle is the best, its eye being uppermost. The syringe should be held as nearly as possible in the long axis of the vein. If the vein shows tendency to roll from under the needle, slight axis traction will steady it. The disappearance of resistance before the needle generally shows that it has entered the vein. It can often be felt to "pop" into the vessel. If doubt exists, a small quantity of blood may be sucked up. All air should be removed from syringe and needle beforehand. The syringe should be inclined, so that any contained air will rise to the piston. The fluid must be injected slowly. The vein should be covered with gauze and bandaged rather tightly immediately after the needle is withdrawn. Collargolum should not be allowed to escape into the tissue. When this precaution is taken, patients rarely complain. Very little or no reaction at the site occurs, and the same vein may be used within a day or two.

The author then details five cases of erysipelas. Three of them promptly recovered after single injections, one of them after two injections, and the last after three injections. Being convinced by an experience of some twenty cases of various diseases of its harmlessness, he recommends that the method be tried in appropriate cases. So impressed is he with the possibilities which the intravenous use of collargolum holds, that he is actively continuing the work upon cases placed at his disposal by Professor Loomis.

Adrenalin for Intestinal Hemorrhage in Typhoid Fever.

Graeser (*Münch. med. Woch.*, July 28, 1903; *British Medical Journal*, Nov. 14, 1903) has had a good experience with adrenalin in the treatment of hemorrhage in typhoid fever, and reports the case. The patient was a female of thirty-six years, and stated that she had been taken ill during the second week in April with an influenza-like cold; fever appeared later, and "crampy" vomiting and attacks of coughing also were noted. On the 26th she was brought in to the hospital. There were signs of diffuse bronchitis, with little stringy, viscid sputum, fever, and slight traces of albumin in the urine. The next day a red punctate erythema appeared, accompanied with swelling of the face. The rash was distributed over the face, arms, legs, and body. On the 22d a patch of dulness was noticed at the left base, with bronchial breathing; the sputum became mucopurulent and bloody, and on the 24th distinctly rusty. On the 29th the patient had some shivering and sweating, and the temperature

fell to normal on the following day. The pulmonary signs, save the bronchitis, disappeared on the same day, but there remained vomiting and diarrhea. On May 6 the temperature rose again and the patient became slightly delirious. On the 15th a roseola rash appeared on the chest and abdomen, and for the first time swelling of the spleen was made out. The typhoid condition continued little altered until the 21st, when a copious intestinal hemorrhage set in. The temperature sank to 99.8° from 104°, and the pulse rate was 108. In spite of the application of ice, opium, bismuth in large doses, and injections of ergotin, the hemorrhage recurred during the following day and night. The patient had become extremely anemic, and the pulse was scarcely perceptible. Fearing that the next bleeding would kill the patient, Graeser tried as a last refuge adrenalin hydrochlorate. He gave thirty drops in some saline solution every three hours. The preparation did not produce any untoward symptoms; the bleeding ceased, and did not recur. She was extremely anemic, but as the infection appeared to be less severe after the hemorrhage she gradually improved, and ultimately recovered.

Graeser says that he is not in a position to decide whether adrenalin given internally acts by stimulating the peripheral vasomotor nerves, or by stimulating the vagus centrally, but he is convinced that it is capable of arresting intestinal hemorrhage. He is also satisfied that it can be given internally with safety.

Urotropin in the Prophylaxis of Scarlatinal Nephritis.

J. Widowitz (*Wiener klinische Wochenschrift,* Oct. 1, 1903) says:

"The beneficial action of urotropin in vesical catarrh, pyelitis, and phosphaturia recorded by so many authors, and ascribed to the disinfectant action of the formalin separated from it in the urinary passages, induced me to use urotropin in scarlatina to prevent the advent of nephritis. For it is probably correctly assumed that the latter is due to the as yet undetermined scarlatinal microbe or its toxins; and an efficient antibacterial agent applied to the site of the infection may inhibit the pathological changes that mark the renal affection.

"During the past three years I used it in 102 cases. From ¾ to 7½ grains was given thrice daily for three consecutive days at the onset of the disease; and the same doses were given at the beginning of the third week when nephritis most commonly occurs. Children from one to fifteen and an adult of twenty-one were treated in this way. The remedy was always well borne.

I have not seen nephritis occur in a single case, although it is the most common complication of scarlatina. Johannessen has seen it in as few as 16 per cent and as many as 90 per cent of the patients. It occurs especially in mild cases, which were the most frequent.

"Two cases deserve special mention. A girl of eleven sickened with a fairly mild attack. On the fifteenth day large quantities of albumin were present in the urine. Five grains urotropin t. i. d. Two days later the albumin permanently disappeared. Another girl of eleven had had paroxysmal hemoglobinuria for eight years. When she fell sick with scarlatina, hemoglobinuria at once appeared. Urotropin 5 grains t. i. d. Urine free from blood coloring matter on the third day. On the fourteenth day temperature rose to 100.6°, and hemoglobinuria reappeared. On the eighteenth day urotropin was again given; blood coloring matter disappearing four days later.

"The absence of nephritis in my 102 cases may possibly have been accidental. But it certainly urges to further clinical trials."

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Prognosis and Treatment of Chronic Deafness.

P. D. Kerrison (*Medical Record,* Nov. 21, 1903) says that there are certain cases of advanced catarrhal deafness—even among those in which no evidence of serious labyrinthine involvement can be found—which do not respond to treatment.

In the large majority of cases the power of audition can be distinctly improved.

In the early stages of catarrhal or tympanic deafness the majority of cases are susceptible of practical and complete cure.

In advanced stages of catarrhal deafness rational treatment often results in an improvement, which adds greatly to the patient's enjoyment of life, though the normal hearing power may never be regained.

Where but slight improvement of hearing is accomplished the result of treatment is often of value to the patient in arresting a process which might otherwise lead to very marked or total deafness.

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THE MEDICAL AGE.

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To the notes below and on the following pages, also in future issues, we respectfully direct your attention.

Very truly yours,
THE BUSINESS MANAGER,
Box 484, Detroit, Michigan.

MAURICE FIESCHOR PILGRIM, A.B., M.D., was born on October 26, 1857, and died Sunday morning, October 18, 1903, at his home, 407 West 57th Street, New York City, after a brief illness of pneumonia. Dr. Pilgrim was a native of New Jersey. He received his degree of M.D. in 1884, and at once entered general practice, deciding at the end of his second year's work to discontinue his general practice and devote his energies to the treatment of the eye, ear, nose, and throat. He spent the following year abroad, entering one of the large hospitals in London in order to more fully equip himself for this line of work. Returning to this country he began the practice of his specialty in Boston, Massachusetts. Being a man of advanced ideas, and realizing early in his career the value of physical measures in the treatment of disease, he became a warm advocate of electricity. He discovered and exploited the beneficial effects of galvanism in the treatment of glaucoma, and wrote quite extensively on this subject. He was among the first in the profession to call attention to the dangers of the *x*-ray in the treatment of cancer. Dr. Pilgrim was a prominent member of the American Electro-Therapeutic Association, having held the high office of first vice-president, and was at the time of his death chairman of the Executive Council of that association, a position previously eligible only to ex-presidents of the association.

In the latter part of September, 1902, his attention was drawn to the new therapy, Mechanical Vibratory Stimulation, which was just beginning to attract the attention of the advanced men in the profession. Realizing the remarkable possibility of this new line of work and the prompt results which usually followed its proper application, he at once began investigation, and the last year of his life was devoted exclusively to placing this science before the profession, having written quite extensively for the medical press; and his book on Vibratory Stimulation is, to-day, the only authority extant on this subject. Dr. Pilgrim was held in high esteem as a writer and advanced thinker, and was quite prominent as a writer on psychological subjects, having held the Chair of Psychiatry in the New York School of Physical Therapeutics, and was editor of the department of psychiatry in the *Journal of Advanced Therapeutics*, at the time of his death.

"INVALIDISM IN GIRLS AND YOUNG WOMEN" was recently discussed in a most interesting and instructive way by Dr. W. E. Anthony, of Providence, Rhode Island, ex-president of the Providence Medical Society.

Dr. Anthony laid special stress on guarding girls from overstudy during the first climacteric, recommending that they should not be kept in school more than three or four hours up to the age of seventeen, and suggested that not only were their nervous systems bankrupted by too great burdening during school life, but that their reproductive organs were not permitted to properly develop, and serious diseases and permanent injury of the uterus and ovaries frequently resulted. Dr. Anthony emphasized the fact that these run-down states were often accompanied by vaginal catarrhs most distressing. He recommended for such cases general internal tonics, blood and nerve builders, and the local use of douches

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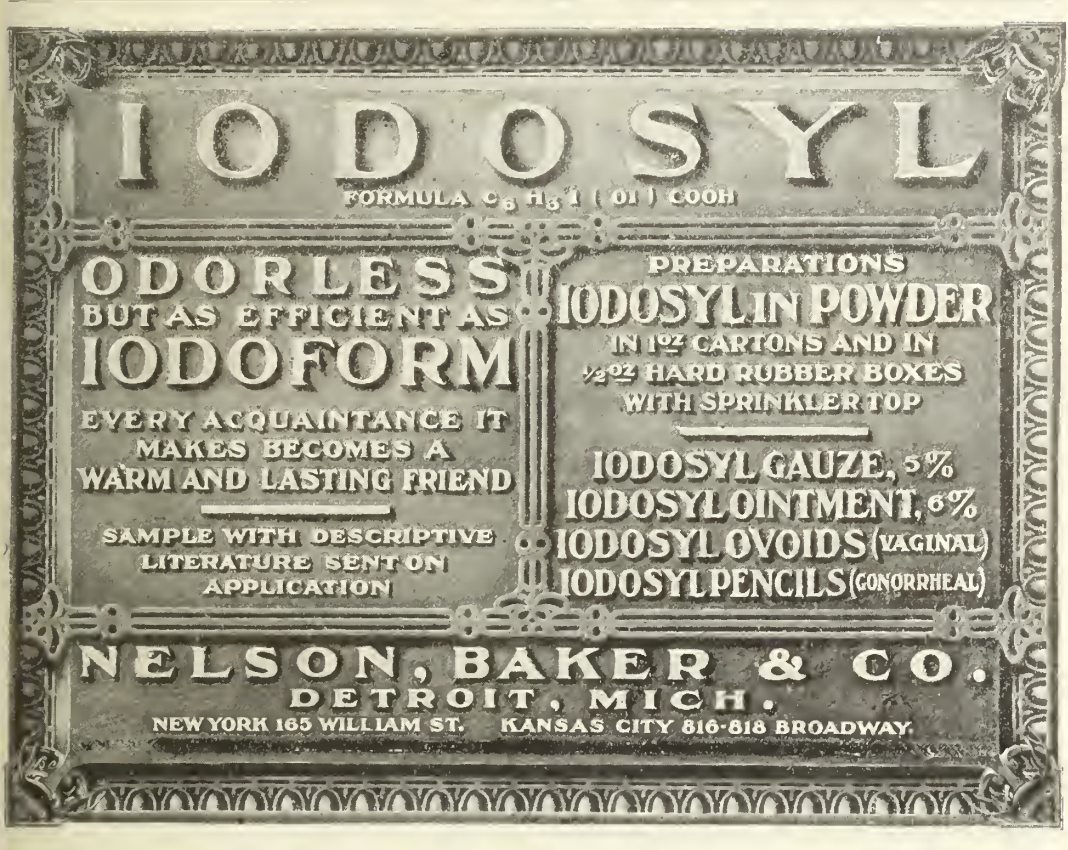
Case 1.—Mrs. G—— applied to me for treatment on July 2, 1903. As a result of general inflammation of the uterus, following a case of gonorrhea of long duration, she had leucorrhea and endometritis. Womb was greatly congested and swollen. She also complained of unmistakable symptoms of dysmenorrhea.

She was requested to douche with warm water, containing a tablespoonful of table salt to the pint, night and morning; after douching, to insert well up into the vagina a Uterine Conoid (Reynolds) night and morning. She had her menses on the 29th of July, which was the date of her regular monthly period (prior to the time of conditions described above), attended by no pain.

I carefully noted in this case that the discharge had yielded to the local therapeutic effect of the Uterine Conoid (Reynolds), by stopping the leucorrheal discharge, reducing the inflammation and swelling of the uterus, and bringing about almost normal conditions, after the first two weeks' treatment.

Continued a conoid every third night for two weeks as a precautionary measure. Patient was entirely relieved.

Case 2.—Miss B. H——, of Biddeford, Maine, was compelled during rehearsals and performance of part in a traveling theatrical company to march and dance until she contracted a metritis of unusual violence. She applied to me one evening after a performance in Jersey City. I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gave her a hypodermic injection of morph. sulph. ¼ grain, then inserted a Uterine Conoid (Reynolds) well up into the vagina after she had retired. Next morning was gratified to learn that Miss H—— had suffered no pain since the application of the medicament.

I gave her the remaining four Uterine Conoids (Reynolds) contained in the physician's sample (sent me by the Reynolds Pharmaceutical Co., Liberty Building, New York) with instructions to use a Conoid every night, just before retiring, and hot-water douches every morning, and see me (this being Thursday) next Sunday.

Miss H—— on entering my office on Sunday, while *en route* through New York for Bridgeport, Conn., said: "My dear Doctor, congratulate me, for through those Uterine Conoids (Reynolds) I have been enabled to appear at every performance, without even one moment's pain, and what makes the action of the Uterine Conoid (Reynolds) more marvelous is that my monthly sickness came upon me last night during sleep without my knowledge, and of course without pain, which has not been my good fortune for five years."

Case 3.—Miss S. M——, chorus girl, twenty-seven years old; irregular and painful menstruation every month for past ten years. Menstruates usually any time between the 20th and the 30th of the month.

Prescribed hot-water bag over seat of pain, and to insert after douching with hot water, well up into the vagina, a Uterine Conoid (Reynolds) every night after retiring, beginning this treatment on the 15th of the month.

Miss S—— menstruated on the 20th, after using five Conoids, viz., one nightly, and I am sure of the same results next month.

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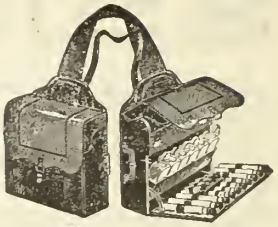

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